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AMBIENT AIR QUALITY
PRE-OPERATIONAL SURVEY

PART II

ENERGY-FROM-WASTE PLANT
VICTORIA HOSPITAL CORPORATION
LONDON, ONTARIO

DECEMBER 1986

ARB-126-87-AQM

JULY 1988

Environment Ontario

Jim Bradley
Minister

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Prepared for
The Southwestern Region
Ministry of the Environment

by

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Atmospheric Research and Special Programs Section
Air Resources Branch
Ministry of the Environment

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TABLE OF CONTENTS

		Page
Executive Summary		1
1.0	Introduction	2
2.0	Mobile Air Monitoring Units (MAMU)	2
3.0	Monitoring Locations	3
4.0	Results and Discussion	3
5.0	References	4
Appendix A - Common Pollutants - Complete Data Set		17
Appendix B - Gas Chromatographic Organics Results		35

Executive Summary

Two mobile air monitoring units (MAMU) from the Air Resources Branch measured ambient air quality parameters near the site of the nearly completed Victoria Hospital Corporation Energy-From-Waste (EFW) plant in London during early December 1986. This was the winter portion of the pre-operational survey to determine the background ambient air concentration of a large number of compounds which may be emitted from the EFW plant in various concentrations. None of the compounds, including sulphur dioxide, carbon monoxide, nitrogen dioxide, mercury and a large number of hydrocarbons and chlorinated hydrocarbons, exceeded or approached the Ministry of the Environment air quality standards, criteria or guidelines.

Sommaire

Au début de décembre 1986, la Direction des ressources atmosphériques a mesuré, à l'aide de deux unités mobiles de surveillance de l'air, la qualité de l'air ambiant près du chantier de la nouvelle station de transformation des déchets en énergie de l'hôpital Victoria, à London. Il s'agissait ici du segment d'hiver des analyses préalables à la mise en service et visant à déterminer les concentrations de fond de l'air ambiant pour un grand nombre de composés susceptibles d'être rejetés par la station en question. Aucune des substances, qu'il s'agisse d'anhydride sulfureux, de monoxyde de carbone, d'oxydes d'azote, de mercure ou d'hydrocarbures ou d'hydrocarbures chlorés, ne dépassait, ni même n'atteignait, les normes, critères et lignes directrices énoncés par le ministère de l'Environnement.

1.0 Introduction

At the request of the Southwestern Region, the Monitoring and Instrumentation Development Unit of the Air Resources Branch performed an ambient air quality survey in London during the period December 1 to December 12, 1986. The air sampling was done near the site of the Victoria Hospital Corporation Energy - From - Waste (EFW) plant and was the winter portion (Part II) of the pre-operational survey. The summer portion (Part I) was performed in 1984[1].

The purpose of the survey was to determine the background ambient air concentrations of a large number of compounds which may be emitted from the EFW plant stack in various concentrations, namely: sulphur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), mercury (Hg), and a large number of hydrocarbons and chlorinated hydrocarbons. Similar surveys will be performed after the EFW plant is in operation in order to assess its impact, if any, on the ambient air quality.

Two mobile air monitoring units (MAMUs) were used to maximize the amount of data obtainable during the allotted survey period.

2.0 Mobile Air Monitoring Units (MAMU)

Each MAMU is a self-contained mobile laboratory equipped with advanced analytical instrumentation dedicated to ambient air monitoring. The instrumentation packages in each vehicle are nearly identical and are listed in Tables 1 and 2. Each MAMU is outfitted with a gas chromatograph (Hewlett-Packard 5880) coupled to a volatile organic compounds (VOC's) preconcentrator of our own design. Ambient air is drawn into the preconcentrator at 100 ml/min where the VOC's are adsorbed in a 10 mm O.D. glass cartridge packed with the adsorbents Carbotrap and Spherocarb.

The sampling periods were 30 or 60 minutes so that the data could be directly compared to Ministry standards or criteria for ambient air. Contaminants trapped by the adsorbents were thermally desorbed, prefocused, and injected onto the GC column head. The samples were

analyzed simultaneously on two 25-metre columns coated with cross-linked SE 54 or OV-1 and detected with flame-ionization detectors. Minimum detection limits were in the 0.1 to 1.0 ug/m^3 range.

3.0 Monitoring Locations

The selection of monitoring locations was based upon the list of "critical receptors" areas noted in an environmental impact study[2] and reproduced in Table 3.

As determined by the wind direction on an hourly basis, the MAMUs were positioned downwind of the site for the EFW plant in whatever critical receptor area was most suitable; otherwise, school yards and apartment building parking lots were the usual monitoring sites. Most of the locations were identical to sites used in the summer portion of the study (Part I)[1]. The precise monitoring locations are listed in Table 4 and displayed on the map in Figure 3.1.

During weekends and overnight, the MAMUs were parked at the MOE regional office, collecting data on all instruments except the GC and Hg analyzers.

4.0 Results and Discussion

A summary of the results is contained in Table 5. Tables 6 and 7 list the characteristics of the common contaminants and the organics measured by MAMUs 1 and 2. Sulphur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), total hydrocarbons (THC) and mercury (Hg) were found in relatively low concentrations during all monitoring periods. The complete data set for these compounds is in Appendix A. None of the Ministry of Environment air quality standards, criteria and guidelines were exceeded or approached.

The mercury measurements provided a valuable comparison to the mercury levels measured in the summer portion (Part I) of the survey[1]. Since the vapour pressure of elemental mercury is strongly dependent on the ambient temperature, a hypothetical steady source of mercury

emissions would lead to mercury levels at 18°C (Part I) approximately five times higher than at 0°C (Part II). There is much greater confidence in the operation of the mercury analyzer and the reliability of its results for the present study than for Part I. The low mercury levels for the present study are equivalent to winter background levels in Windsor (0.01 to 0.03 ug/m^3) and indicate that a range of 0.05 ug/m^3 to 0.15 ug/m^3 would be expected for a summer study. The mercury levels for the summer study ranged from 0.10 to 0.38 ug/m^3, which seems to be falsely high by a factor of two. In summary, there is no evidence that mercury was present above background levels in either Part I or Part II of the pre-operational survey.

The gas chromatographic (GC) results for 133 organic compounds measured by MAMU 1 and 134 compounds measured by MAMU 2 are contained in Appendix B. The total organic compounds (TOC) concentration, as determined by the gas chromatograph for one-hour or half-hour sampling periods, was usually relatively low compared to values for urban air in Southern Ontario. In comparing the Part II results for TOC with the Part I results it was seen that the range of concentrations has not changed, from 0 to 500 ug/m^3, but the median concentration has increased from 60 ug/m^3 to 130 ug/m^3. However, none of the 134 organic compounds which have Ministry of the Environment air quality standards, criteria or guidelines exceeded or approached those significant levels.

5.0 References

1. Ambient Air Quality Pre-Operational Survey Part I, ARB-082-85-AQM, 1985.

2. Victoria Hospital Consultants report presented at Environmental Assessment Board hearing (1983)

Table 1

THE INSTRUMENTATION OF MOBILE AIR MONITORING UNIT #1

Instrument	Manufacturer	Analytical Technique	Full Scale Sensitivity
THC, CH4, TH-M analyzer	Ingenieur-Produktions-Gruppe Munchen (IPM) RS-t	Dual flame ionization	50 ppm THC (as CH4)
H2S, SO2, NOx sources	Hartmann & Braun Prufgasgenerator	N/A	N/A
TRS/SO2 analyzer	Monitor Labs 8850 c/w ML 8770	Fluorescence	0.5 ppm SO2 0.5 ppm TRS
NOx, NO2, NO analyzer	Monitor Labs 8840	Chemi-Luminescence	1.0 ppm NOx (as NO2)
CO analyzer	Thermo Electron P48	Gas Filter Correlation	100 ppm CO (digital)
O3 analyzer/ source	Dasibi 1003-AAS	UV Absorption	1.0 ppm O3 (digital)
Hewlett Packard Data Acquisition System - HP 85 and HP 3497A			
Gas Chromatograph	HP 5880 Dual Capillary Column c/w HP 86 Data Acquisition System	Flame Ionization Det.	as set per calibrations

Meteorological Instrumentation

Instrument	Manufacturer	Scale
** Wind speed	Lambrecht GmBH	km/hr
** Wind direction	Lambrecht GmBH	degrees
Temperature	Weather Measure (WM) T621	degrees Celsius
Humidity	WM-HM-11P	absolute & %
Barometric pressure	WM-BM70-B242	millibars
Solar Radiation	WM Star Pyranometer	milliwatts/cm2

** These instruments are located on top of a 10 metre retractable tower

Table 2

THE INSTRUMENTATION OF MOBILE AIR MONITORING UNIT #2

Instrument	Manufacturer	Analytical Technique	Full Scale Sensitivity
THC, CH4, TH-M analyzer	Ingenieur-Produktions-Gruppe Munchen (IPM) RS-t	Dual flame ionization	50 ppm THC (as CH4)
H2S, SO2, NOx sources	Hartmann & Braun Prufgasgenerator	N/A	N/A
TRS analyzer	Monitor Labs 8850 c/w ML 8770	Fluorescence	0.5 ppm H2S
SO2 analyzer	Monitor Labs 8850	Fluorescence	0.5 ppm SO2
NOx, NO2, NO analyzer	Monitor Labs 8840	Chemi-Luminescence	1.0 ppm NOx (as NO2)
CO analyzer	Thermo Electron P48	Gas Filter Correlation	100 ppm CO (digital)
O3 analyzer/ source	Dasibi 1003-AAS	UV Absorption	1.0 ppm O3 (digital)
Hg analyzer	Scintrex HGP-2	UV Absorption	50 ug/m3

Hewlett Packard Data Acquisition System - HP 85 and HP 3497A

Gas Chromatograph	HP 5880 Dual Capillary Column c/w HP 86 Data Acquisition System	Flame Ionization Det.	as set per calibrations

Meteorological Instrumentation

Instrument	Manufacturer	Scale
** Wind speed	Lambrecht GmBH	km/hr
** Wind direction	Lambrecht GmBH	degrees
Temperature	Weather Measure (WM) T621	degrees Celsius
Humidity	WM-HM-11P	absolute & %
Barometric pressure	WM-BM70-B242	millibars
Solar Radiation	WM Star Pyranometer	milliwatts/cm2

** These instruments are located on top of a 10 metre retractable tower

Table 3

Critical Receptors[1]

	Name	Distance from Victoria Hospital EFW km	Height Above EFW Ground Level m
1.	Bristol Place Apts[2]	0.864	36
2.	Westminister Hospital	0.49	15.6
3.	Pond Mills and Commissioners Rd.	1.77	14.6
4.	Planned Apt. Bldg.[2]	0.30	32
5.	New Victoria Hospital	0.36	29.0
6.	New Parkwood Hospital[2]	0.231	28
7.	Grade @ 6 km SW of site	6.04	52.2
8.	Grade @ 8 km SW of site	8.05	43.9

NOTE: [1]. As contained in Victoria Hospital's consultant's report presented at Environmental Assessment Board hearing in early 1983.
[2]. Revised distance and elevation of receptor

TABLE 4

Monitoring Locations and Periods

Date 1986	MAMU #1 Period # Time	Location	Map I.D. Fig. 3.1	MAMU #2 Period # Time	Location	Map I.D. Fig. 3.1
December 1	A011 14:32-16:33	Parking lot, S of New Victoria Hospital	A	B012 14:41-16:13	Parkwood Hosp. W. Side	B
3	A031 09:57-13:57	53 Parliament Cres.	C	B033 11:36-14:12	38 Silverdale Cres.	D
	A032 14:24-15:34	Near school at Thompson & Chesterfield	E	B034 14:36-15:12	Parkwood Hosp. W. Side	B
4	A042 11:59-14:57	Bristol Apts.	F	B042 10:46-13:25	Westminister Apts.	G
10	A102 10:34-14:26	Bristol Apts.	F	B102 10:58-16:05	Bristol Apts.	F
	A103 14:54-16:45	Parking Lot, S of New Victoria Hosp.	A	B112 11:28-14:58	Thompson Rd. at Park	J
11	A112 11:04-15:06	Gladstone Ave. at Dieppe Apts.	H	B113 15:23-16:27	Parkwood Hosp. S. Side	B
	A113 15:25-16:48	Bristol Apts.	F	B122 09:59-12:14	28 Parliament Cres.	C
12	A122 10:46-12:01	Parliament Cres. at Millbank Dr.	K			

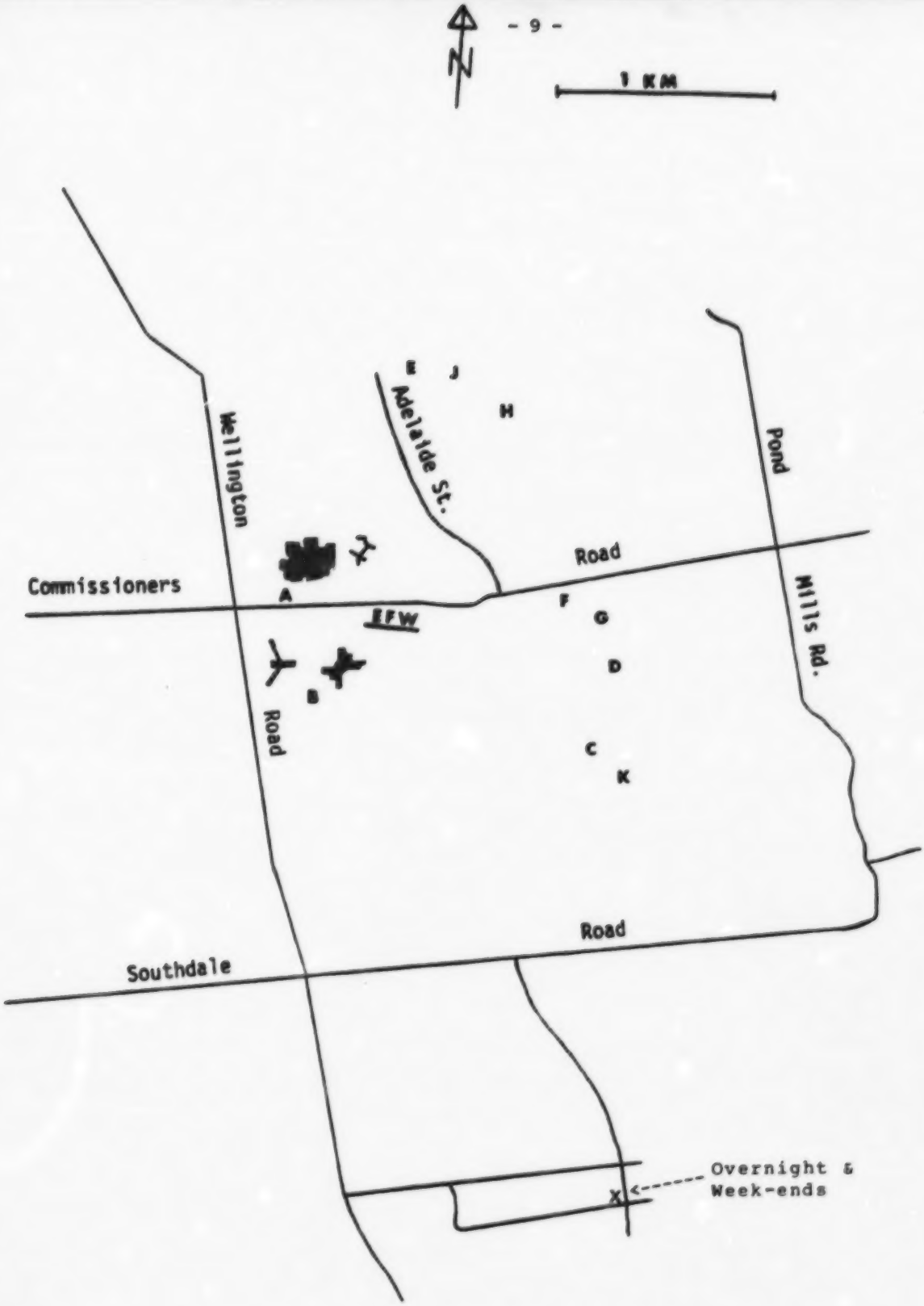

Figure 3.1 Monitoring Locations in Table 4

TABLE 5

Results Summary - Maximum 1-hr Average Concentration (ppm, except as noted)

Monitoring Period #	SO_2	CO	NO_2	Hg (ug/m^3)	THC	TOC** (ug/m^3)	upwind or downwind
A011*	-	0.54	0.06	-	2.1	140	background
B012	0.005	5.91	0.02	-	0.8	118,96	DW
A031	-	1.14	0.07	-	3.6	431,320,132,137	DW
A032	-	0.93	0.05	-	2.7	177	DW
B033	0.010	1.79	0.02	0.011	2.1	148,120	DW
B034	0.005	1.60	0.02	0.010	1.2	433	UW(traffic)
A042	-	0.47	0.04	-	2.4	208,40	DW
B042	0.005	2.75	0.02	0.022	1.4	271,109	DW
A102	0.024	0.47	0.04	-	2.3	158,130	DW
B102	0.022	2.14	0.02	0.005	1.1	266,102,111	DW
A103	0.020	1.86	0.06	-	2.6	304	UW
A112	0.005	0.31	0.04	-	1.4	128,153,24	DW
B112	0.005	2.46	0.02	0.005	1.1	431,113,90	DW
A113	0.005	0.54	0.03	-	1.6	98,20	background
B113	0.005	1.27	0.03	0.005	1.2	88	UW
A122	0.005	0.27	0.02	-	1.8	40	DW
B122	0.005	2.22	0.01	0.005	3.2	391,83	DW

* A refers to MAMU #1
B refers to MAMU #2
** This list contains all of the TOC results from the gas chromatograph.
\- Not monitored.

overnight, weekends at 985 Adelaide St. South	SO_2	CO	NO_2	Hg	THC	TOC
arithmetic mean	0.006	0.57	0.03	-	1.4	-
maximum 1-hr average	0.027	1.94	0.09	-	2.4	-
Ontario Air Quality Criterion	0.25 (1-hr)	30 (1-hr)	0.20 (1-hr)	2.0 (24-hr)	-	-

Table 6

Characteristics of the Common Contaminants as Measured Continuously by MAMu's #1 and #2

All concentrations are in terms of ppm (parts per million)

	Detection Limits	Standards, Guidelines or Provisional Guidelines (1/2-hr)		Criterion (1-hr)	TWA	STEL			Alternate Names
1 SULPHUR DIOXIDE	0.005	0.300	(1)	0.25	2	5		SO2	SULFUR DIOXIDE
2 TOTAL REDUCED SULPHUR	0.005	0.027	* (3)	0.027	10	15	**	TRS	
3 NITROGEN OXIDES	0.01	0.25	*** (1)	N/A	-	-		NOx	OXIDES of NITROGEN
4 NITROGEN DIOXIDE	0.01	N/A		0.20	5	5		NO2	
5 NITRIC OXIDE	0.01	N/A		N/A	25	35		NO	NITROGEN MONOXIDE
6 OZONE	0.01	0.1	(1)	0.08	0.1	0.3		O3	
7 CARBON MONOXIDE	0.1	5.0	(1)	30.0	50	400		CO	

* As equivalent H2S and applicable only for Kraft Pulp Mills
TRS may contain any of the following: Hydrogen Sulphide (H2S), Methyl Mercaptan (CH3SH), Dimethyl Sulphide (C2H6S) and Dimethyl Disulphide (C2H6S2).

** The TWA and STEL for TRS is expressed solely for Hydrogen Sulphide concentrations

*** Expressed as NO2

(1) Standard
(2) Guideline
(3) Provisional Guideline

TWA - Time Weighted Average for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed without adverse effect.

STEL - Short Term Exposure Limit - concentration to which workers can be exposed for a short period of time (15 minutes) without adverse effect.

TABLE 7

MEASURED BY THE GAS CHROMATOGRAPHIC SYSTEMS OF MAMUs #1 and #2

ALL CONCENTRATIONS ARE IN TERMS OF ug/m^3 (micrograma per cubic metre)

	Standards, Guidelines or Provisional Guidelines (1/2 - hr)	Criterion	TWA	STEL	Alternate Names
1 PROPANE					
2 PROPADIENE					ALLENE
3 PROPYNE					METHYL ACETYLENE
4 CHLOROMETHANE	28000 (2)	7000 (A)	105000	205000	METHYL CHLORIDE
5 CYCLOPROPANE					
6 2-METHYLPROPANE					ISOBUTANE
7 CHLOROETHENE	560 (2)	280 (A)	5000	10000	VINYL CHLORIDE; CHLOROETHYLENE
8 2-CHLORO-2METHYLPROPANE					
9 1-BUTENE					
10 1,3-BUTADIENE					
11 BUTANE			1900000		*n-BUTANE*
12 1-BUTYNE					ETHYLACETYLENE
13 CHLOROETHANE			2600000	3250000	ETHYL CHLORIDE
14 3-METHYL-1-BUTENE					ISOAMYLENE
15 2-METHYLBUTANE					ISOPENTANE
16 2-METHYL-1-BUTENE					
17 PENTANE			1800000	2250000	*N-PENTANE*
18 2-METHYL-1,3-BUTADIENE					ISOPRENE
19 trans-2-PENTENE					
20 cis-2-PENTENE					
21 DICHLOROMETHANE	100000 (1)	100000 (B)	350000	1740000	METHYLENE CHLORIDE
22 2-METHYL-2-BUTENE					
23 2,2-DIMETHYLBUTANE					NEOHEXANE
24 trans-1,2-DICHLOROETHENE					
25 3-METHYL-1-PENTENE					
26 4-METHYL-1-PENTENE					
27 CYCLOPENTANE					
28 2,3-DIMETHYLBUTANE					
29 2-METHYLPENTANE					
30 3-METHYLPENTANE					
31 1-HEXENE					
32 cis-1,2-DICHLOROETHENE			790000	1000000	cis-1,2-DICHLOROETHYLENE; SYM-DICHLOROETHYLENE
33 2-CHLOROBUTANE					sec-BUTYL CHLORIDE

Table 7 (cont.)

	Standards, Guidelines or Provisional Guidelines (1/2 - hr)	Criterion	TWA	STEL	Alternate Names
34 1-CHLORO-2-METHYLPROPANE					
35 HEXANE	35000 (2)	12000 (A)	180000		*n-HEXANE*
36 CHLOROFORM	1500 (2)	500 (A)	50000	225000	TRICHLOROMETHANE
37 trans-3-HEXENE					
38 3-CHLORO-2-METHYLPROPENE					ISOBUTENYL CHLORIDE
39 METHYLCYCLOPENTANE					
40 2,4-DIMETHYLPENTANE					
41 1,2-DICHLOROETHANE			40000	60000	ETHYLENE CHLORIDE
42 2,2-DIMETHYLPENTANE					
43 2,2,3-TRIMETHYLBUTANE					
44 1,1,1-TRICHLOROETHANE	350000 (1)	115000 (A)	19000000	2450000	METHYL CHLOROFORM
45 1-CHLOROBUTANE					n-BUTYL CHLORIDE
46 BENZENE	10000 (1)	3300 (A)	30000	75000	
47 TETRACHLOROMETHANE	1800 (2)	600 (A)	20000	125000	CARBON TETRACHLORIDE
48 3,3-DIMETHYLPENTANE					
49 CYCLOHEXANE	300000 (2)	100000 (A)	1050000	1300000	HEXAHYDROBENZENE
50 2,3-DIMETHYLPENTANE					
51 2-METHYLHEXANE					ISOHEPTANE
52 CYCLOHEXENE			1015000		
53 DIBROMOMETHANE					METHYLENE DIBROMIDE; METHYLENE BROMIDE
54 1,2-DICHLOROPROPANE					PROPYLENE CHLORIDE
55 3-METHYLHEXANE					
56 2,3-DICHLOROPROPENE			5000	50000	2,3-DICHLOROPROPYLENE
57 TRICHLOROETHENE	85000 (1)	28000 (A)	270000	1080000	TRICHLOROETHYLENE
58 2,2,4-TRIMETHYLPENTANE					ISOOCTANE
59 1-HEPTENE					
60 HEPTANE			1600000	2000000	*n-HEPTANE*
61 trans-2-HEPTENE					
62 METHYLCYCLOHEXANE			1600000	2000000	HEXAHYDROTOLUENE
63 2,2-DIMETHYLHEXANE					
64 ETHYLCYCLOPENTANE					
65 4-METHYLCYCLOHEXENE					
66 2,5-DIMETHYLHEXANE					

Table 7 (cont.)

	Standards, Guidelines or Provisional Guidelines (1/2 - hr)	Criterion	TWA	STEL	Alternate Names
67 1-CHLOROPENTANE					n-AMYL CHLORIDE; PENTYL CHLORIDE
68 1,1,2-TRICHLOROETHANE					VINYL TRICHLORIDE
69 2,3,4-TRIMETHYLPENTANE					
70 TOLUENE	2000 (1)	2000 (A)	375000	560000	*METHYLBENZENE*; PHENYLMETHANE
71 1,3-DICHLOROPROPANE			350000	510000	TRIMETHYLENE CHLORIDE
72 2-METHYLHEPTANE					
73 4-METHYLHEPTANE					
74 c-1,3-DIMETHYLCYCLOHEXANE					
75 3-METHYLHEPTANE					
76 1,2-DIBROMOETHANE					ETHYLENE DIBROMIDE; ETHYLENE BROMIDE
77 1,1-DIMETHYLCYCLOHEXANE					
78 1-OCTENE	150000 (3)	50000 (A)			
79 trans12DIMETHYLCYCLOHEXANE					*trans-1,2-DIMETHYLCYCLOHEXANE
80 trans-4-OCTENE					
81 TETRACHLOROETHENE	10000 (2)	4000 (A)	335000	1340000	TETRACHLOROETHYLENE; PERCHLOROETHYLENE
82 c-1,4-DIMETHYLCYCLOHEXANE					
83 OCTANE	45400 (3)	15300 (A)	1450000	1800000	*n-OCTANE*
84 trans-2-OCTENE					
85 cis12DIMETHYLCYCLOHEXANE					
86 CHLOROBENZENE			350000		PHENYL CHLORIDE
87 ETHYLCYCLOHEXANE					
88 1-CHLOROHEXANE					n-HEXYL CHLORIDE
89 ETHYLBENZENE	4000 (1)	4000 (B)	435000	545000	
90 m-XYLENE	2300 (4)	2300 (A)	435000	655000	*1,3-DIMETHYLBENZENE*
91 p-XYLENE	2300 (4)	2300 (A)	435000	655000	*1,4-DIMETHYLBENZENE*
92 4-METHYLOCTANE					
93 2-METHYLOCTANE					
94 3-METHYLOCTANE					
95 STYRENE	400 (1)	400 (A)	215000	425000	*ETHENYLBENZENE*; PHENYLETHYLENE; VINYLBENZENE
96 1,4-DICHLOROBUTANE					
97 o-XYLENE	2300 (4)	2300 (A)	435000	655000	*1,2-DIMETHYLBENZENE*
98 1,1,2,2-TETRACHLOROETHANE					ACETYLENE TETRACHLORIDE
99 1,2,3-TRICHLOROPROPANE			300000	450000	TRICHLOROHYDRIN

Table 7 (cont.)

	Standards, Guidelines or Provisional Guidelines (1/2 - hr)	Criterion	TWA	STEL	Alternate Names
100 1-NONENE					
101 trans-1,4-DICL-2-BUTENE					
102 NONANE			1050000	1300000	*n-NONANE*
103 ISOPROPYLBENZENE	100 (3)	100 (B)			*(1-METHYLETHYL)BENZENE*; CUMENE
104 2-CHLOROTOLUENE					*2-CHLORO-1-METHYLBENZENE*; o-TOLYL CHLORIDE; o-CHLOROTOLUENE
105 3-CHLOROTOLUENE					*3-CHLORO-1-METHYLBENZENE*; m-TOLYL CHLORIDE; m-CHLOROTOLUENE
106 4-CHLOROTOLUENE					*4-CHLORO-1-METHYLBENZENE; p-TOLYL CHLORIDE; p-CHLOROTOLUENE
107 PROPYLBENZENE					n-PROPYLBENZENE
108 3-ETHYLTOLUENE					*1-ETHYL-3-METHYLBENZENE*; M-ETHYLTOLUENE
109 4-ETHYLTOLUENE					*1-ETHYL-4-METHYLBENZENE*; P-ETHYLTOLUENE
110 1,3,5-TRIMETHYLBENZENE			125000	170000	MESITYLENE
111 2-ETHYLTOLUENE					*1-ETHYL-2-METHYLBENZENE*; O-ETHYLTOLUENE
112 1,2,4-TRIMETHYLBENZENE	100 (2)	1000 (A)	125000	170000	PSUEDOCUMENE
113 tert.BUTYLBENZENE					*(1,1-DIMETHYLETHYL)BENZENE*
114 tert.BUTYLCYCLOHEXANE					
115 1,3-DICHLOROBENZENE					
116 1-DECENE	180000 (3)	60000 (A)			n-DECYLENE
117 (CHLOROMETHYL)BENZENE					alpha-CHLOROTOLUENE; BENZYL CHLORIDE
118 1,5-DICHLOROPENTANE					
119 isoBUTYLBENZENE					
120 DECANE					*n-DECANE*
121 sec.BUTYLBENZENE					*(1-METHYLPROPYL)BENZENE*
122 3-(CHLOROMETHYL)HEPTANE					
123 1,2,3-TRIMETHYLBENZENE			125000	175000	HEMIMELLITENE
124 1ISOPROPYL4METHYLBENZENE					*METHYL(4-METHYLETHYL)BENZENE*; 3-ISOPROPYLTOLUENE; P-CYMENE
125 1,2-DICHLOROBENZENE					o-DICHLOROBENZENE
126 INDAN					*2,3-DIHYDRO-1H-INDENE*; 2,3-DIHYDROINDENE; HYDRINDENE
127 BUTYLCYCLOHEXANE					n-BUTYLCYCLOHEXANE; 1-CYCLOHEXYLBUTANE
128 1,3-DIETHYLBENZENE					m-DIETHYLBENZENE
129 1,4-DIETHYLBENZENE					p-DIETHYLBENZENE
130 BUTYLBENZENE					n-BUTYLBENZENE
131 1,2-DIETHYLBENZENE					o-DIETHYLBENZENE
132 transDECAHYDRONAPHTHALENE					t-DECALIN; BICYCLO[4,4,0]DECANE

Table 7 (cont.)

	Standards, Guidelines or Provisional Guidelines (1/2 - hr)	Criterion	TWA	STEL	Alternate Names
133 cis-DECAHYDRONAPHTHALENE					c-DECALIN; BICYCLO[4,4,0]DECANE
134 UNDECANE					*n-UNDECANE*; HENDECANE
135 1235-TETRAMETHYLBENZENE					ISODURENE
136 1234-TETRAMETHYLBENZENE					PREHNITENE
137 1,3-DIISOPROPYLBENZENE					*1,3-BIS(1-METHYLETHYL)BENZENE*
138 1234TETRAHYDRONAPHTHALENE					TETRALIN
139 1,4-DIISOPROPYLBENZENE					*1,4-BIS(1-METHYLETHYL)BENZENE*; ISOPROPYLCUMENE
140 NAPHTHALENE	36 (3)	22.5 (A)			
141 DODECANE					*n-DODECANE*

NOTES:

(1) Standard
(2) Guideline
(3) Provisional Guideline
(4) Standard for the sum of o-, m-, & p- Xylenes

(A) Ambient Air Quality Criterion based on a 24-hour average concentration
(B) Ambient Air Quality Criterion based on a 1-hour average concentration
(please note; if the maximum 1-hour average concentration of a contaminant is LESS than the Criterion concentration based on a 24-hour average, then that Criterion has NOT been exceeded.)

TWA - Time Weighted Average for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed without adverse effect.

STEL - Short Term Exposure Limit - concentration to which workers can be exposed for a short period of time (15 minutes) without adverse effect.

* - Denotes name approved by the International Union of Pure and Applied Chemistry (IUPAC).

APPENDIX A

Common Pollutants - Complete Data Set

1-hour average concentrations,
all units parts per million (ppm)
except mercury (Hg) - ug/m^3

LONDON_86 : A011 (MAMU 1)

Start: 86/12/01 14:31 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: PKG LOT @ MAIN ENTRANCE VICTORIA HOSPITAL

Time	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
14:31-15:31	.4	nd	2.09	.49	1.63	.06	.03	.016	-.5	39.	74.
15:01-16:01	.4	nd	2.03	.62	1.43	.05	.03	.015	-.7	39.	74.
15:31-16:31	.5	nd	1.93	.67	1.28	.06	.03	.013	-.8	37.	74.

LONDON_86 : A011

Statistics	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.48	.0013	2.011	.580	1.451	.057	.028	.015	-.7	-	-
Std. Dev.	.23	.0006	.116	.127	.210	.007	.009	.002	.2	-	-
Geo. Mean	.43	.0012	2.007	.566	1.436	.057	.026	.014	-	-	-
Geo.Std.Dev	1.73	1.4215	1.059	1.262	1.153	1.136	1.387	1.176	-	-	-
Min Reading	.05	.0010	1.828	.256	1.212	.041	.010	.009	-1.8	23.7	40.0
Max Reading	1.39	.0026	2.455	.823	1.713	.078	.056	.021	-.2	51.6	91.2
Min Average	.41	.0012	1.927	.489	1.273	.053	.027	.013	-.8	37.1	73.7
Max Average	.54	.0015	2.096	.676	1.630	.059	.029	.016	-.5	39.8	74.6
# Valid Rdgs	121.	121.	121.	121.	121.	121.	121.	121.	121.	121.	121.
Min.Det.Lev	.10	.0020	.100	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	.0270	-	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A031 (MAMU 1)

Start: 86/12/03 09:56 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: 53 PARLIAMENT

Time	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
09:56-10:56	1.0	nd	3.51	1.31	2.20	.07	.03	nd	3.3	20.	294.
10:26-11:26	.9	nd	3.61	1.41	2.20	.05	.02	nd	2.8	19.	294.
10:56-11:56	.9	nd	3.50	1.46	2.04	.04	.02	nd	2.5	17.	290.
11:26-12:26	.9	nd	3.00	1.31	1.68	.04	.02	nd	2.4	16.	281.
11:56-12:56	.7	nd	2.71	1.27	1.42	.04	.02	.005	2.5	16.	274.
12:26-13:26	.9	nd	2.79	1.37	1.41	.04	.01	.007	3.0	16.	271.
12:56-13:56	1.1	nd	2.50	1.43	1.48	.04	.01	.008	2.9	15.	265.

LONDON_86 : A031

Statistics	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.93	.0011	3.056	1.368	1.787	.049	.021	.004	2.8	-	-
Std. Dev.	.72	.0004	1.059	.848	.418	.017	.011	.003	.5	-	-
Geo. Mean	.81	.0011	2.525	1.154	1.741	.047	.019	.004	-	-	-
Geo.Std.Dev	1.58	1.2932	2.608	2.191	1.250	1.329	1.643	1.829	-	-	-
Min Reading	.29	.0010	.050	.050	1.343	.025	.005	.002	2.0	5.8	232.3
Max Reading	7.57	.0031	10.212	10.838	3.036	.121	.054	.044	4.0	37.5	310.7
Min Average	.72	.0010	2.187	1.084	1.399	.039	.014	.002	2.4	14.3	264.6
Max Average	1.14	.0013	3.620	1.475	2.225	.071	.033	.008	3.3	20.3	295.7
# Valid Rdgs	240.	240.	240.	240.	240.	240.	240.	240.	240.	240.	240.
Min.Det.Lev	.10	.0020	.100	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	.0270	-	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A032 (MAMU 1)

Start: 86/12/03 14:23 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: THOMSON RD NEAR SCHOOL

Time	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
14:23-15:23	.9	nd	2.67	1.29	1.35	.05	.02	.007	2.7	11.	246.

LONDON_86 : A032

Statistics	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.92	.0010	2.667	1.293	1.353	.052	.021	.006	2.5	-	-
Std. Dev.	.60	.0000	.095	.086	.009	.007	.006	.002	.4	-	-
Geo. Mean	.85	.0010	2.665	1.290	1.353	.052	.020	.006	-	-	-
Geo.Std.Dev	1.38	1.0000	1.035	1.064	1.007	1.150	1.319	1.300	-	-	-
Min Reading	.57	.0010	2.558	1.195	1.327	.040	.010	.002	1.5	2.9	215.2
Max Reading	5.21	.0010	3.097	1.647	1.389	.073	.039	.010	2.9	28.6	275.1
Min Average	.92	.0010	2.666	1.292	1.353	.051	.019	.007	2.5	10.7	245.4
Max Average	.94	.0010	2.672	1.298	1.354	.053	.020	.007	2.7	11.9	248.2
# Valid Rdgs	70.	70.	70.	70.	70.	70.	70.	70.	70.	70.	70.
Min.Det.Lev	.10	.0020	.100	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	.0270	-	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A042 (MAMU 1)

Start: 86/12/04 11:58 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: BRISTOL APTS @ COMMISSIONERS RD

Time	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
11:58-12:58	.2	nd	2.24	1.02	1.21	.02	.01	.017	.4	35.	243.
12:28-13:28	.2	nd	2.36	1.12	1.22	.02	.01	.016	.3	32.	243.
12:58-13:58	.4	nd	2.34	1.11	1.21	.03	.02	.015	-.6	22.	250.
13:28-14:28	.5	nd	2.28	1.06	1.19	.04	.03	.013	-1.1	15.	263.

LONDON_86 : A042

Statistics	CO	TRS	THC	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.30	.0010	2.269	1.051	1.201	.031	.022	.015	-.4	-	-
Std. Dev.	.21	.0002	.095	.078	.022	.009	.011	.003	.8	-	-
Geo. Mean	.21	.0010	2.267	1.049	1.201	.030	.020	.015	-	-	-
Geo.Std.Dev	2.47	1.1464	1.043	1.077	1.019	1.355	1.714	1.204	-	-	-
Min Reading	.05	.0010	2.077	.882	1.162	.013	.005	.008	-1.6	6.1	227.1
Max Reading	1.19	.0022	2.583	1.276	1.286	.060	.053	.020	.7	54.0	319.8
Min Average	.15	.0010	2.224	1.021	1.187	.022	.014	.013	-1.2	14.6	242.4
Max Average	.47	.0011	2.368	1.133	1.219	.041	.034	.017	.4	35.2	263.0
# Valid Rdgs	178.	178.	178.	178.	178.	178.	178.	178.	178.	178.	178.
Min.Det.Lev	.10	.0020	.100	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	.0270	-	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A102 (MAMU 1)

Start: 86/12/10 10:33 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: BRISTOL APTS @COMMISSIONERS RD

Time	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
10:33-11:33	.3	1.59	nd	.49	1.10	.04	.03	.016	-5.4	22.	253.
11:03-12:03	.3	1.69	nd	.58	1.11	.03	.02	.016	-5.3	25.	248.
11:33-12:33	.4	1.82	nd	.70	1.11	.03	.02	.016	-5.0	26.	250.
12:03-13:03	.5	1.97	.01	.83	1.13	.03	.03	.015	-4.5	23.	254.
12:33-13:33	.4	2.12	.02	.97	1.13	.03	.03	.014	-3.9	24.	252.
13:03-14:03	.3	2.22	.02	1.06	1.14	.03	.02	.015	8	26.	246.

LONDON_86 : A102

Statistics	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.35	1.942	.013	.810	1.125	.033	.025	.015	-4.6	-	-
Std. Dev.	.23	.275	.009	.243	.028	.006	.006	.002	.8	-	-
Geo. Mean	.28	1.922	.010	.771	1.125	.033	.024	.015	-	-	-
Geo.Std.Dev	2.03	1.155	2.073	1.381	1.025	1.181	1.298	1.143	-	-	-
Min Reading	.05	1.480	.005	.415	1.075	.020	.010	.010	-5.8	8.7	223.9
Max Reading	1.62	2.389	.027	1.188	1.216	.052	.045	.025	-2.7	46.7	295.3
Min Average	.26	1.592	.005	.495	1.103	.029	.022	.014	-5.4	22.3	244.4
Max Average	.48	2.279	.024	1.105	1.154	.037	.028	.016	-3.7	26.8	255.7
# Valid Rdgs	233.	233.	233.	233.	233.	233.	233.	233.	233.	233.	233.
Min.Det.Lev	.10	.100	.010	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	-	.250	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A103 (MAMU 1)

Start: 86/12/10 14:53 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: PKG LOT @ MAIN ENTRANCE VICTORIAHOSPITAL

Time	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
14:53-15:53	1.3	2.53	.02	1.38	1.12	.05	.06	.011	-3.4	26.	264.
15:23-16:23	1.6	2.50	.01	1.35	1.12	.05	.07	.010	-3.9	22.	264.

LONDON_86 : A103

Statistics	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	1.63	2.470	.013	1.326	1.120	.057	.070	.010	-4.1	-	-
Std. Dev.	.78	.153	.008	.137	.014	.010	.023	.003	.8	-	-
Geo. Mean	1.45	2.465	.010	1.319	1.120	.056	.067	.009	-	-	-
Geo.Std.Dev	1.66	1.064	2.032	1.110	1.012	1.188	1.402	1.381	-	-	-
Min Reading	.25	2.077	.005	.977	1.086	.039	.027	.002	-5.3	9.1	243.6
Max Reading	4.22	2.813	.026	1.644	1.147	.078	.130	.016	-2.9	41.1	288.8
Min Average	1.27	2.423	.006	1.286	1.117	.050	.057	.008	-4.6	18.8	261.1
Max Average	1.94	2.559	.020	1.403	1.129	.062	.083	.011	-3.4	26.3	264.7
# Valid Rdgs	111.	111.	111.	111.	111.	111.	111.	111.	111.	111.	111.
Min.Det.Lev	.10	.100	.010	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	-	.250	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A112 (MAMU 1)

Start: 86/12/11 11:03 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: CORNER GLADSTONE AVE/DIEPPE ST

Time	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
11:03-12:03	.3	∅	nd	∅	1.10	.04	.02	.016	-2.3	22.	210.
11:33-12:33	.3	∅	nd	∅	1.02	.03	.02	.018	-1.5	25.	213.
12:03-13:03	.3	∅	nd	∅	.99	.03	.02	.018	-.8	26.	213.
12:33-13:33	.3	∅	nd	∅	.96	.03	.02	.018	-.6	30.	211.
13:03-14:03	.3	∅	nd	∅	.96	.03	.01	.019	-.6	34.	208.
13:33-14:33	.3	∅	nd	∅	.97	.02	.01	.019	-.8	37.	206.
14:03-15:03	.3	∅	nd	∅	.97	.03	.01	.018	-1.2	36.	207.

LONDON_86 : A112

Statistics	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.29	-	.005	-	1.004	.030	.017	.018	-1.2	-	-
Std. Dev.	.13	-	.000	-	.068	.010	.005	.002	.8	-	-
Geo. Mean	.27	-	.005	-	1.002	.029	.016	.017	-	-	-
Geo.Std.Dev	1.63	-	1.000	-	1.066	1.338	1.475	1.106	-	-	-
Min Reading	.05	-	.005	-	.933	.013	.005	.013	-2.9	6.8	178.9
Max Reading	.92	-	.005	-	1.218	.075	.029	.020	-.0	51.6	228.5
Min Average	.26	-	.005	-	.957	.024	.014	.016	-2.3	22.4	205.0
Max Average	.31	-	.005	-	1.097	.040	.019	.019	-.5	37.6	216.6
# Valid Rdgs	242.	242.	242.	242.	242.	242.	242.	242.	242.	242.	242.
Min.Det.Lev	.10	.100	.010	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	-	.250	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria
∅ Instrument malfunction / Data not collected

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A113 (MAMU 1)

Start: 86/12/11 15:24 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: BRISTOL APTS./COMMISSIONERS RD

Time	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
15:24-16:24	.5	1.49	nd	nd	1.47	.03	.01	.016	-2.2	30.	204.

LONDON_86 : A113

Statistics	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.55	1.534	.005	.099	1.497	.036	.013	.015	-2.3	-	-
Std. Dev.	.31	.319	.000	.084	.203	.008	.005	.002	.2	-	-
Geo. Mean	.48	1.503	.005	.076	1.484	.035	.012	.014	-	-	-
Geo.Std.Dev	1.65	1.221	1.000	1.934	1.139	1.244	1.589	1.184	-	-	-
Min Reading	.12	.986	.005	.050	1.157	.022	.005	.009	-3.2	7.8	192.7
Max Reading	2.18	2.432	.005	.351	2.097	.064	.023	.017	-2.0	43.0	220.8
Min Average	.47	1.481	.005	.084	1.469	.033	.012	.014	-2.3	24.8	204.1
Max Average	.57	1.603	.005	.115	1.538	.037	.014	.016	-2.2	30.1	206.9
# Valid Rdgs	81.	81.	81.	81.	81.	81.	81.	81.	81.	81.	81.
Min.Det.Lev	.10	.100	.010	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	-	.250	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : A122 (MAMU 1)

Start: 86/12/12 10:45 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: CORNER PARLIAMENT CR./MILLBANK

Time	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
10:45-11:45	.3	1.77	nd	.65	1.18	.02	nd	.026	.7	18.	289.

LONDON_86 : A122

Statistics	CO	THC	SO2	Non-CH4	Methane	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	.28	1.768	.005	.657	1.162	.023	.009	.026	.4	-	-
Std. Dev.	.34	.327	.000	.128	.127	.005	.005	.001	1.1	-	-
Geo. Mean	.21	1.680	.005	.625	1.155	.022	.008	.026	-	-	-
Geo.Std.Dev	1.83	1.592	1.000	1.544	1.106	1.335	1.652	1.042	-	-	-
Min Reading	.05	.050	.005	.050	.906	.005	.005	.024	-1.8	3.7	259.9
Max Reading	2.22	2.612	.005	.970	1.665	.039	.021	.029	1.8	32.5	318.5
Min Average	.21	1.767	.005	.649	1.168	.021	.008	.026	.3	16.9	287.0
Max Average	.29	1.832	.005	.685	1.183	.023	.009	.027	.7	18.5	289.9
# Valid Rdgs	75.	75.	75.	75.	75.	75.	75.	75.	75.	75.	75.
Min.Det.Lev	.10	.100	.010	.100	.100	.010	.010	.004	-	-	-
1 hr Crit.	30.00	-	.250	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B012 (MAMU 2)

Start: 86/12/01 14:40 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: NW CORNER VICTORIA HOSPITAL

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
14:40-15:40	5.8	.003	.83	nd	.11	.70	.03	.02	.01	.015	.3	26.	94.
15:10-16:10	5.3	.003	.83	nd	nd	.72	.03	.02	.01	.014	.1	27.	95.

LONDON_86 : B012

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	d C	km/h	deg
Arith. Mean	5.28	.0031	.832	.005	.111	.706	.032	.016	.015	.014	.2	-	-
Std. Dev.	1.30	.0022	.122	.000	.101	.054	.007	.005	.005	.002	.3	-	-
Geo. Mean	5.13	.0024	.825	.005	.089	.704	.031	.015	.014	.014	-	-	-
Geo.Std.Dev	1.27	2.1687	1.139	1.000	1.838	1.077	1.236	1.466	1.499	1.176	-	-	-
Min Reading	3.16	.0010	.655	.005	.050	.609	.019	.005	.005	.009	-.3	17.1	81.0
Max Reading	9.65	.0093	1.487	.005	.750	.890	.055	.028	.028	.022	1.0	41.0	103.0
Min Average	5.16	.0028	.821	.005	.097	.695	.030	.015	.014	.014	.1	25.5	93.7
Max Average	5.98	.0033	.842	.005	.116	.719	.033	.017	.015	.015	.3	27.0	94.9
# Valid Rdgs	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B033 (MAMU 2)

Start: 86/12/03 11:35 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: 38 SILVERDALE CRES

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
11:35-12:35	1.8	.003	1.95	nd	.59	1.42	.04	.02	.02	nd	.005	2.8	11.	277.
12:05-13:05	1.8	.004	2.04	nd	.63	1.47	.04	.01	.03	nd	.006	3.0	11.	275.
12:35-13:35	1.7	.004	2.01	nd	.62	1.46	.03	nd	.02	nd	.007	3.3	11.	274.
13:05-14:05	1.7	.004	2.04	nd	.63	1.49	.03	nd	.02	nd	.007	3.0	12.	273.

LONDON_86 : B033

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ug/m^3	ppm	d C	km/h	deg
Arith. Mean	1.76	.0037	2.001	.007	.612	1.457	.034	.011	.022	.010	.006	2.9	-	-
Std. Dev.	.39	.0023	.277	.004	.115	.171	.007	.005	.004	.004	.002	.3	-	-
Geo. Mean	1.73	.0028	1.984	.006	.603	1.448	.034	.010	.022	.010	.006	-	-	-
Geo.Std.Dev	1.20	2.1508	1.138	1.514	1.190	1.117	1.221	1.653	1.202	1.155	1.378	-	-	-
Min Reading	1.26	.0010	1.496	.005	.407	1.159	.021	.005	.015	.010	.002	2.3	3.5	227.9
Max Reading	4.01	.0098	3.642	.018	1.272	2.455	.063	.027	.038	.060	.011	3.6	24.9	297.8
Min Average	1.67	.0028	1.946	.005	.589	1.423	.029	.008	.019	.010	.005	2.8	10.4	272.2
Max Average	1.81	.0046	2.109	.010	.659	1.520	.041	.016	.026	.011	.007	3.3	11.8	277.3
# Valid Rdgs	156.	156.	156.	156.	156.	156.	156.	156.	156.	156.	156.	156.	156.	156.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.005	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B034 (MAMU 2)

Start: 86/12/03 14:35 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: NW CORNER VICTORIA HOSP(UPWIND)

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir

LONDON_86 : B034

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ug/m^3	ppm	d C	km/h	deg
Arith. Mean	1.63	.0040	1.167	.005	.301	.915	.042	.017	.025	.010	.008	2.6	-	-
Std. Dev.	.17	.0022	.046	.000	.041	.009	.008	.004	.005	.000	.001	.4	-	-
Geo. Mean	1.62	.0033	1.166	.005	.299	.915	.042	.017	.025	.010	.008	-	-	-
Geo.Std.Dev	1.10	1.9925	1.037	1.000	1.116	1.010	1.162	1.223	1.185	1.000	1.188	-	-	-
Min Reading	1.37	.0010	1.124	.005	.275	.893	.034	.011	.020	.010	.005	.6	4.4	222.1
Max Reading	2.35	.0091	1.411	.005	.520	.930	.083	.031	.052	.010	.010	2.8	15.8	332.2
# Valid Rdgs	36.	36.	36.	36.	36.	36.	36.	36.	36.	36.	36.	36.	36.	36.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.005	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B042 (MAMU 2)

Start: 86/12/04 10:45 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: WESTMINSTER APTS

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
10:45-11:45	2.7	.004	1.43	nd	.43	1.05	.03	.01	.02	nd	.016	.0	21.	271.
11:15-12:15	2.5	.003	1.34	nd	.38	1.00	.03	.01	.02	nd	.016	.4	25.	274.
11:45-12:45	2.2	.005	1.23	nd	.32	.97	.03	.01	.02	nd	.016	.3	27.	276.
12:15-13:15	1.8	.006	1.23	nd	.31	.98	.03	.01	.01	nd	.017	.3	29.	277.

LONDON_86 : B042

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ug/m³	ppm	d C	km/h	deg
Arith. Mean	2.21	.0046	1.322	.005	.364	1.008	.034	.015	.016	.014	.016	.1	-	-
Std. Dev.	.70	.0032	.283	.000	.210	.062	.008	.005	.004	.045	.002	.4	-	-
Geo. Mean	2.12	.0034	1.307	.005	.347	1.007	.033	.014	.015	.011	.016	-	-	-
Geo.Std.Dev	1.31	2.2954	1.141	1.000	1.283	1.061	1.188	1.380	1.332	1.484	1.175	-	-	-
Min Reading	1.36	.0010	1.108	.005	.253	.905	.027	.005	.005	.010	.005	-.8	4.4	255.3
Max Reading	6.59	.0138	4.641	.005	2.909	1.376	.084	.044	.033	.025	.019	1.2	42.6	317.9
Min Average	1.63	.0031	1.216	.005	.306	.962	.031	.012	.014	.010	.016	.0	21.1	270.7
Max Average	2.78	.0065	1.425	.005	.426	1.045	.037	.019	.017	.022	.017	.5	28.9	277.9
# Valid Rdgs	169.	169.	169.	169.	169.	169.	169.	169.	169.	169.	169.	169.	169.	169.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.005	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B102 (MAMU 2)

Start: 86/12/10 10:57 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: BRISTOL APTS

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
10:57-11:57	1.6	nd	1.08	nd	.18	.87	.05	nd	.04	nd	.005	-6.6	16.	263.
11:27-12:27	1.7	.002	1.00	nd	.14	.83	.05	nd	.04	nd	.005	-6.4	17.	263.
11:57-12:57	1.9	.003	.98	nd	.15	.81	.06	.01	.05	nd	.005	-6.0	15.	267.
12:27-13:27	1.9	.003	.95	.02	.12	.80	.06	.01	.05	nd	.006	-5.7	16.	265.
12:57-13:57	1.5	.003	.92	.02	nd	.80	.06	.01	.05	nd	.010	-5.5	17.	260.
13:27-14:27	1.4	.003	.90	.02	nd	.79	.06	.01	.05	nd	.014	-5.5	15.	256.
13:57-14:57	1.6	.003	.89	.02	nd	.79	.05	nd	.04	nd	.015	-5.2	16.	254.
14:27-15:27	2.0	.003	.90	.02	nd	.79	.06	.01	.04	nd	.014	-4.9	14.	256.
14:57-15:57	2.1	.004	.92	.02	nd	.79	.06	.02	.05	nd	.013	-5.1	12.	258.

LONDON_86 : B102

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ug/m^3	ppm	d C	km/h	deg
Arith. Mean	1.76	.0029	.956	.013	.115	.813	.056	.011	.046	.005	.010	-5.7	-	-
Std. Dev.	.34	.0025	.093	.007	.066	.039	.018	.008	.011	.052	.005	.7	-	-
Geo. Mean	1.73	.0021	.951	.011	.097	.812	.054	.009	.045	.052	.009	-	-	-
Geo.Std.Dev	1.21	2.2600	1.098	1.964	1.809	1.048	1.338	1.842	1.258	3.037	1.757	-	-	-
Min Reading	1.18	.0010	.785	.005	.050	.749	.023	.005	.023	.005	.002	-7.0	4.7	228.7
Max Reading	3.16	.0130	1.321	.024	.349	.953	.163	.049	.114	.005	.017	-4.1	28.1	301.3
Min Average	1.40	.0017	.882	.005	.071	.787	.048	.007	.042	.005	.005	-6.6	11.7	253.8
Max Average	2.15	.0041	1.078	.022	.180	.873	.067	.018	.051	.005	.015	-4.9	17.2	268.0
# Valid Rdgs	307.	307.	307.	307.	307.	307.	307.	307.	307.	307.	307.	307.	307.	307.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.005	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B112 (MAMU 2)

Start: 86/12/11 11:27 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: THOMPSON RD

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
11:27-12:27	2.5	.003	1.08	nd	.24	.83	.03	nd	.01	nd	.015	-3.2	7.	224.
11:57-12:57	2.3	.003	1.04	nd	.23	.80	.02	nd	.01	nd	.017	-2.7	8.	224.
12:27-13:27	2.1	.002	1.02	nd	.22	.79	.02	nd	.01	nd	.017	-2.5	11.	219.
12:57-13:57	2.0	.002	1.01	nd	.22	.79	.02	nd	nd	nd	.017	-2.4	13.	216.
13:27-14:27	1.9	.003	1.00	nd	.21	.78	.02	.01	nd	nd	.017	-2.5	14.	216.
13:57-14:57	1.8	.004	1.00	nd	.21	.78	.03	.02	nd	nd	.016	-2.7	13.	214.

LONDON_86 : B112

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ug/m^3	ppm	d C	km/h	deg
Arith. Mean	2.10	.0029	1.030	.005	.223	.798	.025	.012	.010	.005	.016	-2.7	-	-
Std. Dev.	.30	.0024	.043	.000	.023	.023	.004	.007	.005	.044	.002	.4	-	-
Geo. Mean	2.08	.0021	1.029	.005	.221	.797	.025	.010	.009	.186	.016	-	-	-
Geo.Std.Dev	1.16	2.2270	1.042	1.000	1.104	1.029	1.156	1.800	1.672	1.289	1.131	-	-	-
Min Reading	1.27	.0010	.960	.005	.177	.764	.019	.005	.005	.005	.010	-4.0	1.2	192.2
Max Reading	2.92	.0118	1.193	.005	.315	.868	.039	.025	.021	.005	.021	-2.0	24.0	250.3
Min Average	1.79	.0020	.997	.005	.208	.780	.023	.007	.005	.005	.015	-3.2	7.1	212.8
Max Average	2.46	.0039	1.082	.005	.241	.828	.027	.021	.014	.005	.017	-2.3	14.2	224.8
# Valid Rdgs	210.	210.	210.	210.	210.	210.	210.	210.	210.	210.	210.	210.	210.	210.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.005	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B113 (MAMU 2)

Start: 86/12/11 15:22 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: UPWIND AT PARKWOOD HOSP

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
15:22-16:22	1.3	.004	1.22	nd	.32	.89	.05	.03	nd	nd	.011	-3.1	24.	198.

LONDON_86 : B113

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ug/m^3	ppm	d C	km/h	deg
Arith. Mean	1.29	.0044	1.233	.005	.329	.893	.050	.029	.008	.005	.011	-3.1	-	-
Std. Dev.	.13	.0032	.082	.000	.070	.022	.011	.004	.006	.013	.002	.2	-	-
Geo. Mean	1.28	.0032	1.230	.005	.322	.893	.049	.029	.006	.190	.011	-	-	-
Geo.Std.Dev	1.11	2.4114	1.069	1.000	1.236	1.025	1.226	1.134	1.656	1.070	1.205	-	-	-
Min Reading	1.05	.0010	1.094	.005	.236	.842	.037	.024	.005	.005	.006	-3.4	15.9	182.9
Max Reading	1.57	.0129	1.387	.005	.453	.930	.081	.039	.030	.005	.014	-2.8	31.5	213.3
Min Average	1.27	.0042	1.224	.005	.322	.891	.049	.029	.007	.005	.011	-3.1	23.9	198.4
Max Average	1.28	.0045	1.241	.005	.334	.896	.050	.029	.008	.005	.011	-3.1	24.0	199.0
# Valid Rdgs	64.	64.	64.	64.	64.	64.	64.	64.	64.	64.	64.	64.	64.	64.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.005	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

LONDON_86 : B122 (MAMU 2)

Start: 86/12/12 09:58 Scan: 60 sec
Average: 60.00 min Report: 30.00 min
Loc: 28 PARLIAMENT AVE

Time	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
09:58-10:58	2.2	.003	2.66	nd	.81	1.92	.03	nd	.02	nd	.017	-1.5	12.	307.
10:28-11:28	1.4	.003	2.83	nd	.85	2.04	.02	nd	.02	nd	.018	-.3	10.	300.
10:58-11:58	1.2	.004	3.20	nd	.99	2.27	.02	nd	.02	nd	.020	-.7	9.	297.

LONDON_86 : B122

Statistics	CO	TRS	THC	SO2	Non-CH4	Methane	NOx	NO2	NO	Hg	Ozone	Temp	Wind-Spd	Wind-Dir
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ug/m^3	ppm	d C	km/h	deg
Arith. Mean	1.83	.0033	3.031	.005	.939	2.156	.025	.006	.019	.010	.019	-.9	-	-
Std. Dev.	.96	.0023	.837	.000	.331	.514	.005	.003	.004	.000	.002	1.1	-	-
Geo. Mean	1.66	.0025	2.929	.005	.888	2.102	.024	.006	.018	.010	.019	-	-	-
Geo.Std.Dev	1.52	2.1636	1.294	1.000	1.392	1.249	1.253	1.425	1.279	1.000	1.102	-	-	-
Min Reading	.94	.0010	1.703	.005	.402	1.367	.011	.005	.005	.010	.015	-2.6	3.9	265.1
Max Reading	7.73	.0107	6.097	.005	2.159	4.048	.040	.016	.030	.010	.022	1.2	20.2	328.1
Min Average	1.17	.0028	2.665	.005	.802	1.919	.021	.005	.017	.010	.017	-1.5	9.3	296.7
Max Average	2.22	.0037	3.500	.005	1.117	2.452	.028	.007	.020	.010	.020	-.2	11.6	306.7
# Valid Rdgs	135.	135.	135.	135.	135.	135.	135.	135.	135.	135.	135.	135.	135.	135.
Min.Det.Lev	.10	.0020	.100	.010	.100	.100	.010	.010	.010	.005	.004	-	-	-
1 hr Crit.	30.00	.0270	-	.250	-	-	-	.200	-	-	.080	-	-	-

- Invalid Data / Not Calculated
nd Average is less than Min. Detectable Level
m One or more readings Missing
* Average is above Provincial Std/Criteria

Percent Valid Data Required for Valid Average: 90.0 %
Averaging Started at Nearest: .0 min
Averages updated every SCAN time

APPENDIX B

Gas Chromatograph Results

Units are ug/m^3

Sample periods are 30-minute or 60-minute duration and should be compared to standards (30) or criteria (60) as listed in Table 7.

GCLONDON_86 DATA ACQUIRED BY NAMU 1

30-MINUTE SAMPLE PERIOD ENDING.. PERIOD #	1986 DEC 1 15:56 A011	1986 DEC 3 10:34 A031	1986 DEC 3 11:34 A031	1986 DEC 3 12:34 A031	1986 DEC 3 13:34 A031	1986 DEC 3 14:57 A032	1986 DEC 4 13:54 A042	1986 DEC 4 15:17 A042	1986 DEC 10 11:33 A102	1986 DEC 10 13:27 A102	1986 DEC 10 15:49 A103	1986 DEC 11 11:37 A112	1986 DEC 11 13:18 A112	1986 DEC 11 14:27 A112	1986 DEC 11 16:02 A113	1986 DEC 11 17:23 A113	1986 DEC 12 10:24 A121	1986 DEC 12 11:12 A122	AVERAGE	COUNT
1 ETHANE																				
2 PROPANE	26.45	52.01	33.50	11.73	14.29	6.45	3.43	3.46	20.07	15.73	18.29	28.27	35.33	2.88	1.87		8.51	2.23	16.67	17
3 PROPADIENE																				
4 PROPYNE																				
5 CYCLOPROPANE											1.08								1.08	1
6 CHLOROMETHANE																				
7 2-METHYLPROPANE	6.09		19.51	6.00	6.10	7.53	10.80		8.01	4.97	8.43	7.55	7.68		6.44		9.57		8.27	13
8 CHLOROETHENE																				
9 1-BUTENE		0.39	1.79						1.05		2.14						12.20		4.31	5
10 2CHLORO2METHYLPROPANE																				
11 1,3-BUTADIENE																				
12 BUTANE	31.61	122.69	86.77	19.20	31.53	36.46	52.91		34.45	25.70	40.51	34.85	31.27		28.15		56.51	13.83	43.10	15
13 1-BUTYNE																				
14 CHLOROETHANE																				
15 3-METHYL-1-BUTENE																				
16 2-METHYLBUTANE	13.51	18.58	28.29	8.51	12.63	15.00	20.87		12.24	10.04	22.31	8.74	11.00		9.51		29.89	5.39	15.16	15
17 1-PENTENE																				
18 PENTANE	7.96	9.79	14.15	5.43	7.06	8.19	10.62		7.73	6.99	14.13	4.70	6.57		5.71		24.03		9.58	14
19 2-METHYL-1,3-BUTADIENE																				
20 TRANS-2-PENTENE	0.71								0.70		1.75						2.22		1.35	4
21 CIS-2-PENTENE																				
22 DICHLOROMETHANE																				
23 2-METHYL-2-BUTENE																				
24 3-CHLOROPROPENE																				
25 2,2-DIMETHYLBUTANE							1.08		0.71		1.10						2.33		1.31	4
26 4-METHYL-1-PENTENE																				
27 3-METHYL-1-PENTENE																				
28 CYCLOPENTANE									1.33	1.23	1.93	0.82	1.15				3.55		1.67	6
29 TRANS12DICHOROETHANE		4.91	7.20	2.75	3.93	4.18	5.40		4.75	4.20	9.87	2.60	3.43		2.61		18.18		5.69	13

1 ETHANE
2 PROPANE
3 PROPADIENE
4 PROPYNE
5 CYCLOPROPANE
6 CHLOROMETHANE
7 2-METHYLPROPANE
8 CHLOROETHENE
9 1-BUTENE
10 2CHLORO2METHYLPROPANE
11 1,3-BUTADIENE
12 BUTANE
13 1-BUTYNE
14 CHLOROETHANE
15 3-METHYL-1-BUTENE
16 2-METHYLBUTANE
17 1-PENTENE
18 PENTANE
19 2-METHYL-1,3-BUTADIENE
20 TRANS-2-PENTENE
21 CIS-2-PENTENE
22 DICHLOROMETHANE
23 2-METHYL-2-BUTENE
24 3-CHLOROPROPENE
25 2,2-DIMETHYLBUTANE
26 4-METHYL-1-PENTENE
27 3-METHYL-1-PENTENE
28 CYCLOPENTANE
29 TRANS12DICHOROETHANE

GCLONDON_86 DATA ACQUIRED BY MANU 1

30-MINUTE SAMPLE PERIOD ENDING..	1986 DEC 1 15:56	1986 DEC 3 10:34	1986 DEC 3 11:34	1986 DEC 3 12:34	1986 DEC 3 13:34	1986 DEC 3 14:57	1986 DEC 4 13:54	1986 DEC 4 15:17	1986 DEC 10 11:33	1986 DEC 10 13:27	1986 DEC 10 15:49	1986 DEC 11 11:37	1986 DEC 11 13:18	1986 DEC 11 14:27	1986 DEC 11 16:02	1986 DEC 11 17:23	1986 DEC 12 10:24	1986 DEC 12 11:12	AVERAGE	COUNT
PERIOD #	A011	A031	A031	A031	A031	A032	A042	A042	A102	A102	A103	A112	A112	A112	A113	A113	A121	A122		
30 2,3-DIMETHYLBUTANE							1.29		0.87	0.81	2.19	0.57			0.98		0.43		1.59	7
31 2-METHYLPENTANE		5.27	7.66	3.56	4.00	5.01	6.06	2.21	4.19	4.12	10.60	2.70	3.64	1.17	2.94	1.37	25.00		5.64	16
32 3-METHYLPENTANE	3.52	3.73	5.28	2.49	3.59	3.55	4.20	1.34	2.96	2.92	7.41	2.38	2.49	0.65	2.00	0.94	16.82		3.89	17
33 1-HEXENE											0.37						0.81		0.59	2
34 CIS-1,2-DICHLOROETHENE		1.31								1.96	1.04						2.14		1.39	4
35 2-CHLOROBUTANE																				
36 HEXANE	4.39	5.70	7.52	3.34	4.16	4.38	6.66	2.25	4.46	4.04	8.44	2.35	3.56	1.61	2.78	2.27	20.61		5.21	17
37 TRICHLOROMETHANE																				
38 TRANS-3-HEXENE																				
39 3-CHLORO-2-METHYLPROPENE											0.61						0.87		0.74	2
40 METHYLCYCLOPENTANE		2.25	2.83	1.38	1.91	1.78	2.35	0.80	1.62	1.59	3.63	1.04	1.33	0.48	1.07	0.66	8.17		2.06	16
41 1,2-DICHLOROETHANE																				
42 1,1,1-TRICHLOROETHANE		16.11	14.95	11.73	9.25	9.61	9.96	4.01	7.30	5.43	5.97	7.67	9.51		8.45		7.20		9.08	14
43 1-CHLOROBUTANE																				
44 BENZENE	4.57	119.17	12.28	30.03	5.21	11.37	3.95	6.04	4.48	3.62	11.67	5.92	3.13	4.02	3.38	6.99	13.25		14.78	17
45 TETRACHLOROMETHANE											16.77						26.88		21.83	2
46 CYCLOHEXANE	0.32	4.47	3.11	0.31	0.56	0.26	0.46	0.22	1.91	0.80	0.51	0.39	0.40		0.30	0.24	1.35		0.98	16
47 2,3-DIMETHYLPENTANE		3.53	5.59	2.34	2.78	2.87	3.41	2.18	2.37	2.43	6.78	1.36	1.97	1.22	1.57		11.23		3.44	15
48 2-METHYLHEXANE		3.96	6.38	2.68	3.17	3.28	3.90	2.49	2.71	2.78	7.74	1.55	2.25	1.40	1.88		12.82		3.93	15
49 CYCLOHEXENE																	0.52		0.52	1
50 DIBROMOMETHANE																				
51 3-METHYLHEXANE	2.14	2.88	3.46	1.42	2.00	2.09	2.44	1.40	1.74	1.80	4.66	0.99	1.35	0.84	1.05	1.50	9.09		2.37	17
52 1,2-DICHLOROPROPANE																				
53 2,3-DICHLOROPROPENE																				
54 TRICHLOROETHENE																1.64			1.64	1
55 2,2,4-TRIMETHYLPENTANE	2.32	3.07	4.12	1.74	1.79	2.22	2.59	1.54	1.66	1.62	4.12	1.10	1.31	0.84	1.27		3.00		2.14	16
56 1-HEPTENE																				
57 HEPTANE	1.40	1.77	2.75	0.79	1.12	1.23	1.64	0.61	1.19	1.25	3.28	0.57	0.76	0.42	0.60	0.82	6.06		1.54	17
58 1-CHLORO-3-METHYLBUTANE																				

30 2,3-DIMETHYLBUTANE
31 2-METHYLPENTANE
32 3-METHYLPENTANE
33 1-HEXENE
34 CIS-1,2-DICHLOROETHENE
35 2-CHLOROBUTANE
36 HEXANE
37 TRICHLOROMETHANE
38 TRANS-3-HEXENE
39 3-CHLORO-2-METHYLPROPENE
40 METHYLCYCLOPENTANE
41 1,2-DICHLOROETHANE
42 1,1,1-TRICHLOROETHANE
43 1-CHLOROBUTANE
44 BENZENE
45 TETRACHLOROMETHANE
46 CYCLOHEXANE
47 2,3-DIMETHYLPENTANE
48 2-METHYLHEXANE
49 CYCLOHEXENE
50 DIBROMOMETHANE
51 3-METHYLHEXANE
52 1,2-DICHLOROPROPANE
53 2,3-DICHLOROPROPENE
54 TRICHLOROETHENE
55 2,2,4-TRIMETHYLPENTANE
56 1-HEPTENE
57 HEPTANE
58 1-CHLORO-3-METHYLBUTANE

GCLONDON_86 DATA ACQUIRED BY HANU 1

30-MINUTE SAMPLE PERIOD ENDING..	1986 DEC 1 15:56	1986 DEC 3 10:34	1986 DEC 3 11:34	1986 DEC 3 12:34	1986 DEC 3 13:34	1986 DEC 3 14:57	1986 DEC 4 13:54	1986 DEC 4 15:17	1986 DEC 10 11:33	1986 DEC 10 13:27	1986 DEC 10 15:49	1986 DEC 11 11:37	1986 DEC 11 13:18	1986 DEC 11 14:27	1986 DEC 11 16:02	1986 DEC 11 17:23	1986 DEC 12 10:24	1986 DEC 12 11:12	AVERAGE	COUNT
PERIOD #	A011	A031	A031	A031	A031	A032	A042	A042	A102	A102	A103	A112	A112	A112	A113	A113	A121	A122		
59 TRANS-2-HEPTENE																				
60 METHYLCYCLOHEXANE																				
61 4-METHYLCYCLOHEXENE			0.43																0.43	1
62 2,5-DIMETHYLHEXANE	0.34	0.39	0.44			0.33	0.35		0.24	0.24	0.77						0.98		0.48	9
63 1-CHLOROPENTANE																				
64 1,1,2-TRICHLOROETHANE																				
65 TOLUENE		13.36	16.47	4.92	6.53	9.70	9.91	3.26	6.65	5.87	15.42	3.09	3.27	2.34	4.12		19.27		8.15	15
66 1,3-DICHLOROPROPANE																				
67 2-METHYLHEPTANE		0.61	0.92	0.36	0.51	0.58	0.61	0.15	0.45	0.52	1.45	0.43	0.13		0.13		2.36		0.66	14
68 4-METHYLHEPTANE			0.51			0.31	0.35		0.24	0.31	0.88						1.24		0.55	7
69 3-METHYLHEPTANE	1.37	1.11	1.99	0.72	1.32	1.54	1.62	0.97	1.06	0.99	2.68	0.50	0.61	0.43	0.50		4.28		1.36	16
70 1,2-DIBROMOETHANE																				
71 1-OCTENE																				
72 TRANS12DIMETHYLCYCLOHEXAN											0.21						0.61		0.31	2
73 TRANS-4-OCTENE																				
74 TETRACHLOROETHENE		1.93	1.09			2.43					1.07								1.83	4
75 2-METHYL-1-HEPTENE		1.13	1.43	0.51	0.68	0.97	0.88		0.69	0.79	2.01	0.34	0.38				3.07		1.07	12
76 OCTANE	0.84																		0.84	1
77 2-OCTENE																				
78 CIS12DIMETHYLCYCLOHEXAN											0.41						0.63		0.52	2
79 CHLOROBENZENE		0.32	0.28			0.36		0.44			0.49	0.58		0.60				0.74	0.48	8
80 ETHYLCYCLOHEXANE																				
81 PROPYLCYCLOPENTANE																				
82 1-CHLOROHEXANE																				
83 ETHYLBENZENE	2.09	2.80	3.64	1.36	1.77	2.44	2.11		1.46	1.69	4.27	0.87	0.80	0.57	0.89		5.15		2.13	15
84 M-XYLENE		7.02	8.91	3.89	4.90	8.01	5.68	3.08	3.63	4.48	13.55	2.06	2.20	2.07	2.31		16.14	2.09	5.68	16
85 4-METHYLOCTANE		0.32	0.68			0.68	0.35		0.34	0.38	1.15						1.51		0.68	8
86 2-METHYLOCTANE											0.68						0.83		0.76	2
87 STYRENE		0.45	0.35								0.59						0.52		0.48	4

59 TRANS-2-HEPTENE
60 METHYLCYCLOHEXANE
61 4-METHYLCYCLOHEXENE
62 2,5-DIMETHYLHEXANE
63 1-CHLOROPENTANE
64 1,1,2-TRICHLOROETHANE
65 TOLUENE
66 1,3-DICHLOROPROPANE
67 2-METHYLHEPTANE
68 4-METHYLHEPTANE
69 3-METHYLHEPTANE
70 1,2-DIBROMOETHANE
71 1-OCTENE
72 TRANS12DIMETHYLCYCLOHEXAN
73 TRANS-4-OCTENE
74 TETRACHLOROETHENE
75 2-METHYL-1-HEPTENE
76 OCTANE
77 2-OCTENE
78 CIS12DIMETHYLCYCLOHEXAN
79 CHLOROBENZENE
80 ETHYLCYCLOHEXANE
81 PROPYLCYCLOPENTANE
82 1-CHLOROHEXANE
83 ETHYLBENZENE
84 M-XYLENE
85 4-METHYLOCTANE
86 2-METHYLOCTANE
87 STYRENE

GCLONDON_86 DATA ACQUIRED BY MAMU 1

30-MINUTE SAMPLE PERIOD ENDING..	1986 DEC 1 15:56	1986 DEC 3 10:34	1986 DEC 3 11:34	1986 DEC 3 12:34	1986 DEC 3 13:34	1986 DEC 3 14:57	1986 DEC 4 13:54	1986 DEC 4 15:17	1986 DEC 10 11:33	1986 DEC 10 13:27	1986 DEC 10 15:49	1986 DEC 11 11:37	1986 DEC 11 13:18	1986 DEC 11 14:27	1986 DEC 11 16:02	1986 DEC 11 17:23	1986 DEC 12 10:24	1986 DEC 12 11:12	AVERAGE	COUNT
PERIOD #	A011	A031	A031	A031	A031	A032	A042	A042	A102	A102	A103	A112	A112	A112	A113	A113	A121	A122		
88 3METHYLOCTANE																				
89 1,4-DICHLOROBUTANE																				
90 O-XYLENE	2.37	2.42	3.11	1.58	2.05	4.47	2.04	1.34	1.47	1.65	5.23	1.08	0.81	0.80	0.92		5.70	0.88	2.23	17
91 1,1,2,2-TETRACHLOROETHANE																				
92 1,2,3-TRICHLOROPROPANE																				
93 1-NONENE																				
94 TRANS14DICHLOROBUTENE																				
95 NONANE	0.56	0.91	0.99		0.44	1.92	0.63		0.64	0.66	1.18						1.37		0.93	10
96 ISOPROPYLBENZENE						0.87					0.42								0.65	2
97 2-CHLOROTOLUENE																				
98 3-CHLOROTOLUENE																				
99 N-PROPYLBENZENE									0.44										0.44	1
100 4-CHLOROTOLUENE	0.41	0.54	0.63			0.92				0.39	0.50						0.63		0.59	7
101 3-ETHYLTOLUENE							2.20	1.10	1.60			1.47				0.62			1.41	5
102 4-ETHYLTOLUENE		1.08	0.75	0.83	0.96	2.19	0.68		0.54	0.55	2.18						1.29		1.11	10
103 1,3,5-TRIMETHYLBENZENE							1.41	0.71	1.15										1.09	3
104 2-ETHYLTOLUENE							0.87		0.77										0.82	2
105 1,2,4-TRIMETHYLBENZENE			3.70				3.69		2.63	2.57	9.80								4.48	5
106 tert-BUTYLBENZENE		4.15	4.75	2.35	2.48	10.73	4.04		1.56	3.60	13.60		1.58	1.29			0.71	1.55	4.65	13
107 tBUTYLCYCLOHEXANE																				
108 1,3-DICHLOROBENZENE																				
109 1-DECENE																				
110 (CHLOROMETHYL)BENZENE																				
111 1,5-DICHLOROPENTANE																				
112 1ISOBUTYLBENZENE																				
113 DECANE		1.05	0.89			2.62	1.66		0.63	0.52	1.06		0.45		3.92	3.05	1.22	1.02	1.57	12
114 secBUTYLBENZENE																				
115 3-(CHLOROMETHYL)HEPTANE																				
116 1,2,3-TRIMETHYLBENZENE							0.91		0.85								2.04		1.27	3

88 3METHYLOCTANE
89 1,4-DICHLOROBUTANE
90 O-XYLENE
91 1,1,2,2-TETRACHLOROETHANE
92 1,2,3-TRICHLOROPROPANE
93 1-NONENE
94 TRANS14DICHLOROBUTENE
95 NONANE
96 ISOPROPYLBENZENE
97 2-CHLOROTOLUENE
98 3-CHLOROTOLUENE
99 N-PROPYLBENZENE
100 4-CHLOROTOLUENE
101 3-ETHYLTOLUENE
102 4-ETHYLTOLUENE
103 1,3,5-TRIMETHYLBENZENE
104 2-ETHYLTOLUENE
105 1,2,4-TRIMETHYLBENZENE
106 tert-BUTYLBENZENE
107 tBUTYLCYCLOHEXANE
108 1,3-DICHLOROBENZENE
109 1-DECENE
110 (CHLOROMETHYL)BENZENE
111 1,5-DICHLOROPENTANE
112 1ISOBUTYLBENZENE
113 DECANE
114 secBUTYLBENZENE
115 3-(CHLOROMETHYL)HEPTANE
116 1,2,3-TRIMETHYLBENZENE

GCLONDON_86 DATA ACQUIRED BY MANU 1

30-MINUTE SAMPLE PERIOD ENDING..	1986 DEC 1 15:56	1986 DEC 3 10:34	1986 DEC 3 11:34	1986 DEC 3 12:34	1986 DEC 3 13:34	1986 DEC 3 14:57	1986 DEC 4 13:54	1986 DEC 4 15:17	1986 DEC 10 11:33	1986 DEC 10 13:27	1986 DEC 10 15:49	1986 DEC 11 11:37	1986 DEC 11 13:18	1986 DEC 11 14:27	1986 DEC 11 16:02	1986 DEC 11 17:23	1986 DEC 12 10:24	1986 DEC 12 11:12	AVERAGE	COUNT	
PERIOD #	A011	A031	A031	A031	A031	A032	A042	A042	A102	A102	A103	A112	A112	A112	A113	A113	A121	A122			
117 1ISOPROPYL4METHYLBENZENE										0.36									0.36	1	117 1ISOPROPYL4METHYLBENZENE
118 1,2-DICHLOROBENZENE																					118 1,2-DICHLOROBENZENE
119 INDAN	0.38					0.70			0.29	0.29	1.23						0.59		0.50	6	119 INDAN
120 N-BUTYLCYCLOHEXANE																					120 N-BUTYLCYCLOHEXANE
121 1,3-DIETHYLBENZENE											0.48								0.48	1	121 1,3-DIETHYLBENZENE
122 1,4-DIETHYLBENZENE											0.78								0.78	1	122 1,4-DIETHYLBENZENE
123 N-BUTYLBENZENE											0.56						0.78		0.67	2	123 N-BUTYLBENZENE
124 1,2-DIETHYLBENZENE																					124 1,2-DIETHYLBENZENE
125 T-DECALIN																					125 T-DECALIN
126 C-DECALIN																					126 C-DECALIN
127 UNDECANE	0.90	2.64	1.48	0.99		1.39	11.17		1.20	1.52	1.34		6.44		1.53				2.78	11	127 UNDECANE
128 1235-TETRAMETHYLBENZENE	0.45										1.26								0.86	2	128 1235-TETRAMETHYLBENZENE
129 1234-TETRAMETHYLBENZENE											0.59								0.59	1	129 1234-TETRAMETHYLBENZENE
130 1234-TETRAHYDRONAPTHALENE																					130 1234-TETRAHYDRONAPTHALENE
131 DIISOPROPYLBENZENE																					131 DIISOPROPYLBENZENE
132 NAPTHALENE																					132 NAPTHALENE
133 DODECANE		3.43	0.66	1.11			2.76				1.07	1.08	6.90		1.33		0.94	11.01	3.03	10	133 DODECANE
Total Compounds Identified	23	40	45	32	31	40	45	23	48	43	63	34	34	21	31	13	54	11			Total Compounds Identified
Total # of Peaks		74	95	62	57	81	69	40	80	86	142	47	47	41	43	41	112	41			Total # of Peaks
Total Hydrocarbons ug/m3	114.70	431.25	320.52	132.13	137.52	176.62	207.86	39.6	157.91	130.51	384.32	128.32	152.58	24.43	98.13	20.1	416.82	39.54			Total Hydrocarbons ug/m3
Alkanes ug/m3	103.96	244.35	234.5	70.49	97.73	107.24	151.68	18.6	111.36	98.69	172.55	99.59	124.59	11.46	74.88	9.95	254.76	34.28			Alkanes ug/m3
Cycloalkanes ug/m3	0.32	6.72	5.94	1.69	2.47	2.04	2.81	1.02	4.86	3.62	7.77	2.25	2.88	0.48	1.37	0.9	14.11	0			Cycloalkanes ug/m3
Alkenes ug/m3	0.71	5.52	3.22	0.51	0.68	0.97	0.8	0	2.44	0.79	6.27	0.34	0.38	0	0	0	18.3	6			Alkenes ug/m3
Cycloalkenes ug/m3	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0.52	0			Cycloalkenes ug/m3
Alkynes ug/m3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Alkynes ug/m3
Aromatics ug/m3	9.86	150.45	51.96	44.96	23.9	50.48	37.49	15.53	27.6	24.68	81.63	15.29	11.79	11.89	11.62	7.61	73.44	4.52			Aromatics ug/m3

GCLONDON_86 DATA ACQUIRED BY MAMU 1

30-MINUTE SAMPLE PERIOD ENDING.. PERIOD #	1986 DEC 1 15:56 A011	1986 DEC 3 10:34 A031	1986 DEC 3 11:34 A031	1986 DEC 3 12:34 A031	1986 DEC 3 13:34 A031	1986 DEC 3 14:57 A032	1986 DEC 4 13:54 A042	1986 DEC 4 15:17 A042	1986 DEC 10 11:33 A102	1986 DEC 10 13:27 A102	1986 DEC 10 15:49 A103	1986 DEC 11 11:37 A112	1986 DEC 11 13:18 A112	1986 DEC 11 14:27 A112	1986 DEC 11 16:02 A113	1986 DEC 11 17:23 A113	1986 DEC 12 10:24 A121	1986 DEC 12 11:12 A122	AVERAGE	COUNT
Chlorinated alkanes ug/m3	0	16.11	14.95	11.73	9.25	9.61	9.96	4.01	7.3	5.43	22.74	7.67	9.51	0	8.45	0	30.08	0		
Chlorinated alkenes ug/m3	0	8.15	9.09	2.75	3.93	6.61	5.4	0	4.75	5.26	12.59	2.6	3.43	0	2.61	1.64	21.11	0		
Chlorinated aromatics ug/m3	0.41	0.86	0.91	0	0	1.28	0	0.44	0	0.39	1.07	0.58	0	0.6	0	0	0.63	0.74		
Toluene:Ethylbenzene	0	5	4	4	4	4	5		5	3	4	4	4	4	5		4		4	
Benzene:Ethylbenzene	2	43	3	22	3	5	2		3	2	3	7	4	8	4		3		7	
Xylenes:Ethylbenzene	1	3	3	4	4	5	4		3	4	4	5	4	5	4		4		4	

Chlorinated alkanes ug/m3
Chlorinated alkenes ug/m3
Chlorinated aromatics ug/m3

Toluene:Ethylbenzene
Benzene:Ethylbenzene
Xylenes:Ethylbenzene

GCLONDON_86 DATA ACQUIRED BY MAMU 2

SAMPLE PERIOD DURATION WAS 30 MINUTES OR 60 MINUTES AND SHOULD BE COMPARED
TO STANDARDS(30) OR CRITERIA(60) AS LISTED IN TABLE 6

SAMPLE PERIOD	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986		
DURATION/ENDING	DEC 1	DEC 1	DEC 3	DEC 3	DEC 3	DEC 4	DEC 4	DEC 4	DEC 10	DEC 10	DEC 10	DEC 11	DEC 11	DEC 11	DEC 11	DEC 12	DEC 12		
	30/14:47	60/15:59	60/13:19	30/14:11	30/15:04	30/11:17	30/12:12	60/13:10	60/11:59	60/13:41	60/15:55	30/11:57	30/13:09	30/14:20	30/15:49	30/10:26	30/11:35	AVERAGE	COUNT
PERIOD #	B012	B012	B033	B033	B034	B042	B042	B042	B102	B102	B102	B112	B112	B112	B113	B122	B122		
1 ETHANE																			ETHANE
2 PROPANE	6.06	5.54	7.49	6.57	7.92	5.44	5.25	4.93	8.32	7.10	7.16	7.54	7.85	7.79	7.75	5.60	4.03	6.61	17 PROPANE
3 PROPADIENE		0.33						0.28	0.25	0.25	0.28							0.28	5 PROPADIENE
4 PROPYNE	0.56	0.48	0.38			0.66		0.44	0.37	0.38	0.44							0.46	8 PROPYNE
5 CHLOROMETHANE																			CHLOROMETHANE
6 CYCLOPROPANE																			CYCLOPROPANE
7 2-METHYLPROPANE	3.57	2.16	10.03	4.89	23.60	10.12	3.36	3.35	12.97	3.81	3.82	16.46	4.04	3.82	5.57	11.59	2.73	7.41	17 2-METHYLPROPANE
8 CHLOROETHENE																			CHLOROETHENE
9 1-BUTENE	3.15																1.16	2.16	2 1-BUTENE
10 1,3-BUTADIENE																			1,3-BUTADIENE
11 BUTANE	14.90	8.54	22.48	13.04	67.19	32.16	9.74	10.89	33.93	10.58	10.65	48.54	10.57	9.44	13.93	57.94	7.35	22.46	17 BUTANE
12 1-BUTYNE																			1-BUTYNE
13 CHLOROETHANE																			CHLOROETHANE
14 3-METHYL-1-BUTENE					1.52				0.84			1.29						1.22	3 3-METHYL-1-BUTENE
15 2-METHYLBUTANE	12.97	9.53	10.35	10.87	75.47	39.92	10.28	10.32	41.51	10.05	10.68	73.05	12.17	8.61	11.24	64.34	8.03	24.72	17 2-METHYLBUTANE
16 1-PENTENE	0.84		0.62		2.41	1.57		0.53	1.26	0.44	0.47	2.13				1.74		1.20	10 1-PENTENE
17 PENTANE	9.41	2.20	10.85	8.12	54.39	30.37	7.79	7.30	31.16	7.14	7.74	58.25	9.71	6.25	6.65	38.29	5.34	17.70	17 PENTANE
18 2-METHYL-1,3-BUTADIENE	3.07	1.39		2.32	1.38	2.77	2.90	1.83	1.34	1.04	1.16	1.64	1.19	1.33		1.14		1.75	14 2-METHYL-1,3-BUTADIENE
19 TRANS-2-PENTENE	1.36	0.73		0.69	4.28	2.60	0.70	0.67	2.09	0.60	0.66	3.77	0.68		0.81	3.12		1.63	14 TRANS-2-PENTENE
20 CIS-2-PENTENE	0.75				2.34	1.43		0.38	1.18	0.33	0.37	2.14				1.02		1.19	9 CIS-2-PENTENE
21 DICHLOROMETHANE												4.34	4.40	6.68				5.14	3 DICHLOROMETHANE
22 2-METHYL-2-BUTENE	2.69	1.38	1.88	1.53	8.32	5.43	1.59	1.42	4.57	1.24	1.28	8.31	1.55	1.02	1.08	7.03	0.98	3.82	17 2-METHYL-2-BUTENE
23 3-CHLOROPROPENE																			3-CHLOROPROPENE
24 2,2-DIMETHYLBUTANE		0.45		0.75	4.11	2.53	0.75	0.75	2.61	0.71	0.75	4.84	1.08	0.67		4.16	0.68	1.77	14 2,2-DIMETHYLBUTANE
25 2-CHLORO-2-METHYLPROPANE																			2-CHLORO-2-METHYLPROPANE
26 TRANS-1,2-DICHLOROETHENE																			TRANS-1,2-DICHLOROETHENE
27 4-METHYL-1-PENTENE																			4-METHYL-1-PENTENE
28 3-METHYL-1-PENTENE																			3-METHYL-1-PENTENE
29 CYCLOPENTANE	1.05	0.95	1.95	1.64	7.23	4.23	1.32	1.12	4.15	1.18	1.40	8.26	2.10	1.54	1.45	5.31	1.41	2.72	17 CYCLOPENTANE
30 2,3-DIMETHYLBUTANE	1.16	0.96	1.95	1.22	6.04	4.00	1.16	1.26	3.64	1.12	1.29	7.04	1.79	1.25	1.24	6.95	1.50	2.56	17 2,3-DIMETHYLBUTANE
31 2-METHYLPENTANE	6.32	4.39	8.48	6.16	32.33	21.42	6.37	6.44	20.30	5.69	6.40	39.17	7.71	5.30	4.18	35.04	6.70	13.88	17 2-METHYLPENTANE
32 3-METHYLPENTANE	4.37	2.95	5.19	4.22	20.89	14.15	4.26	4.40	13.25	3.82	4.26	25.17	5.00	3.35	3.02	23.80	4.56	8.67	17 3-METHYLPENTANE
33 1-HEXENE					0.99				0.57			0.97						0.84	3 1-HEXENE
34 cis-1,2-DICHLOROETHENE																			cis-1,2-DICHLOROETHENE
35 2-CHLOROBUTANE																			2-CHLOROBUTANE
36 HEXANE	7.05	5.28	7.30	5.93	23.63	16.87	5.82	5.86	14.36	4.88	5.30	26.31	7.47	4.65	4.06	25.51	5.85	10.36	17 HEXANE

GCLONDON_86 DATA ACQUIRED BY MAMU 2

SAMPLE PERIOD DURATION WAS 30 MINUTES OR 60 MINUTES AND SHOULD BE COMPARED
TO STANDARDS(30) OR CRITERIA(60) AS LISTED IN TABLE 6

SAMPLE PERIOD DURATION/ENDING PERIOD #	1986 DEC 1 30/14:47 B012	1986 DEC 1 60/15:59 B012	1986 DEC 3 60/13:19 B033	1986 DEC 3 30/14:11 B033	1986 DEC 3 30/15:04 B034	1986 DEC 4 30/11:17 B042	1986 DEC 4 30/12:12 B042	1986 DEC 4 60/13:10 B042	1986 DEC 10 60/11:59 B102	1986 DEC 10 60/13:41 B102	1986 DEC 10 60/15:55 B102	1986 DEC 11 30/11:57 B112	1986 DEC 11 30/13:09 B112	1986 DEC 11 30/14:20 B112	1986 DEC 11 30/15:49 B113	1986 DEC 12 30/10:26 B122	1986 DEC 12 30/11:35 B122	AVERAGE	COUNT	
37 TRICHLOROMETHANE																				TRICHLOROMETHANE
38 TRANS-3-HEXENE					1.13				0.46			0.96						0.85	3	TRANS-3-HEXENE
39 3-CHLORO-2-METHYLPROPENE																				3-CHLORO-2-METHYLPROPENE
40 METHYLCYCLOPENTANE	3.09	2.24	2.18	1.80	6.94	5.39	1.88	2.06	3.97	1.58	1.71	6.85	2.09	1.34	1.35	10.14	2.33	3.35	17	METHYLCYCLOPENTANE
41 1,2-DICHLOROETHANE																				1,2-DICHLOROETHANE
42 1,1,1-TRICHLOROETHANE			1.75						1.74					2.89				2.13	3	1,1,1-TRICHLOROETHANE
43 1-CHLOROBUTANE																				1-CHLOROBUTANE
44 BENZENE **	*	*	14.55	20.57	13.78	12.71	8.37	6.62	5.58	4.55	5.37	7.81	5.29	4.60	4.40	7.67	3.88	7.40	17	BENZENE
45 TETRACHLOROMETHANE					8.20	6.17		3.32	5.40			11.20				9.98		7.39	6	TETRACHLOROMETHANE
46 CYCLOHEXANE		0.60	0.43		0.97	0.85		0.44	1.07	0.45		1.03				1.60		0.83	9	CYCLOHEXANE
47 2-METHYLHEXANE					5.83	4.73	1.96	2.14	3.83	1.77	1.96	6.63	2.35	1.48	1.33	7.99	2.28	3.41	13	2-METHYLHEXANE
48 2,3-DIMETHYLPENTANE	1.16	0.99	1.13	1.14	2.71	2.05	1.05	1.07	1.76	0.94	1.02	2.89	1.13		0.97	3.27	0.97	1.52	16	2,3-DIMETHYLPENTANE
49 CYCLOHEXENE																				CYCLOHEXENE
50 3-METHYLHEXANE	2.32	1.96	2.48	2.27	6.41	5.27	2.23	2.43	4.35	2.06	2.28	7.34	2.71	1.70	1.54	8.60	2.54	3.44	17	3-METHYLHEXANE
51 DIBROMOMETHANE																				DIBROMOMETHANE
52 1,2-DICHLOROPROPANE																				1,2-DICHLOROPROPANE
53 2,3-DICHLOROPROPENE																				2,3-DICHLOROPROPENE
54 TRICHLOROETHENE																				TRICHLOROETHENE
55 1-HEPTENE		0.53	0.47		1.06	0.98		0.48	0.69			1.06						0.75	7	1-HEPTENE
56 2,2,4-TRIMETHYLPENTANE	1.08	0.99	1.07	1.03	2.08	1.25		0.88	1.23	0.99	1.07	1.24		0.84	1.17	3.71	1.18	1.32	15	2,2,4-TRIMETHYLPENTANE
57 HEPTANE	1.48	1.35	1.97	1.91	4.19	3.69	1.79	1.90	3.16	1.71	1.94	5.22	2.41	1.63	1.34	5.66	2.04	2.55	17	HEPTANE
58 1-CHLORO-3-METHYLBUTANE																				1-CHLORO-3-METHYLBUTANE
59 TRANS-2-HEPTENE																				TRANS-2-HEPTENE
60 METHYLCYCLOHEXANE	1.01	0.96	0.82	0.72	1.57	1.44		0.80	1.04	0.65	0.68	1.50	0.74			2.98	1.02	1.14	14	METHYLCYCLOHEXANE
61 2,5-DIMETHYLHEXANE									0.35							0.57		0.46	2	2,5-DIMETHYLHEXANE
62 4-METHYLCYCLOHEXENE																				4-METHYLCYCLOHEXENE
63 1-CHLOROPENTANE									0.62							1.06		0.84	2	1-CHLOROPENTANE
64 1,1,2-TRICHLOROETHANE									2.36									2.36	1	1,1,2-TRICHLOROETHANE
65 TOLUENE	5.85	5.70	6.34	6.17	8.50	7.27	5.36	5.39	6.90	5.20	5.42	7.62	5.16	4.37	4.62	9.98	4.88	6.16	17	TOLUENE

GCLONDON_86 DATA ACQUIRED BY NAMU 2

SAMPLE PERIOD DURATION WAS 30 MINUTES OR 60 MINUTES AND SHOULD BE COMPARED
TO STANDARDS(30) OR CRITERIA(60) AS LISTED IN TABLE 6

SAMPLE PERIOD	1986 DEC 1	1986 DEC 1	1986 DEC 3	1986 DEC 3	1986 DEC 3	1986 DEC 4	1986 DEC 4	1986 DEC 4	1986 DEC 10	1986 DEC 10	1986 DEC 10	1986 DEC 11	1986 DEC 11	1986 DEC 11	1986 DEC 11	1986 DEC 12	1986 DEC 12			
DURATION/ENDING	30/14:07	60/15:59	60/13:19	30/14:11	30/15:04	30/11:17	30/12:12	60/13:10	60/11:59	60/13:41	60/15:55	30/11:57	30/13:09	30/14:20	30/15:49	30/10:26	30/11:35	AVERAGE	COUNT	
PERIOD #	B012	B012	B033	B033	B034	B042	B042	B042	B102	B102	B102	B112	B112	B112	B113	B122	B122			
66 1,3-DICHLOROPROPANE																				1,3-DICHLOROPROPANE
67 2-METHYLHEPTANE	0.75	0.64	0.92	0.77	1.63	1.71	0.87	0.79	1.33	0.80	0.86	2.32	0.96			1.75	0.80	1.13	15	2-METHYLHEPTANE
68 4-METHYLHEPTANE																				4-METHYLHEPTANE
69 3-METHYLHEPTANE	0.84	0.88	1.14	1.00	1.82	1.67	0.92	0.95	1.50	0.97	1.00	2.19	1.09			1.99	0.88	1.25	15	3-METHYLHEPTANE
70 1,2-DIBROMOETHANE																				1,2-DIBROMOETHANE
71 1-OCTENE																				1-OCTENE
72 TRANS-4-OCTENE																				TRANS-4-OCTENE
73 2-METHYL-1-HEPTENE																				2-METHYL-1-HEPTENE
74 OCTANE	1.05	1.63	2.40	1.21	1.90	1.82	1.09	0.97	1.14	0.95	1.08	1.91	1.27	1.00	0.91	1.90	1.14	1.37	17	OCTANE
75 TRANS12DIMETHYLCYCLOHEXAN	1.15	1.80	2.64	1.33	2.09	1.99	1.20	1.07	1.26	1.05	1.18	2.10	1.39	1.09	1.00	2.08	1.24	1.51	17	TRANS12DIMETHYLCYCLOHEXAN
76 TETRACHLOROETHENE									1.68									1.68	1	TETRACHLOROETHENE
77 2-OCTENE																				2-OCTENE
78 PROPYLCYCLOPENTANE																				PROPYLCYCLOPENTANE
79 CIS12DIMETHYLCYCLOHEXANE																				CIS12DIMETHYLCYCLOHEXANE
80 CHLOROBENZENE																				CHLOROBENZENE
81 ETHYLCYCLOHEXANE																				ETHYLCYCLOHEXANE
82 1-CHLOROHEXANE																				1-CHLOROHEXANE
83 ETHYLBENZENE	1.57	1.59	1.65	1.50	2.03	1.92	1.36	1.38	1.50	1.40	1.53	1.67	1.40	1.19	1.24	2.23	1.20	1.56	17	ETHYLBENZENE
84 M-XYLENE & P-XYLENE	4.88	4.86	4.78	4.81	6.12	5.80	4.03	4.09	4.40	4.09	4.41	4.96	4.17	3.53	3.67	6.42	3.66	4.63	17	M-XYLENE
85 P-XYLENE																				P-XYLENE
86 4-METHYLOCTANE		0.48							0.45		0.42							0.45	3	4-METHYLOCTANE
87 2-METHYLOCTANE		0.47	0.40						0.44		0.41							0.43	4	2-METHYLOCTANE
88 3-METHYLOCTANE																				3-METHYLOCTANE
89 STYRENE		0.41																0.41	1	STYRENE
90 1,4-DICHLOROBUTANE																				1,4-DICHLOROBUTANE
91 1,1,2,2-TETRACHLOROETHANE																				1,1,2,2-TETRACHLOROETHANE
92 O-XYLENE	1.76	1.76	1.73	1.78	2.25	2.05	1.50	1.47	1.62	1.52	1.63	1.80	1.53	1.31	1.34	2.16	1.35	1.68	17	O-XYLENE
93 1-NONENE																				1-NONENE
94 1,2,3-TRICHLOROPROPANE																				1,2,3-TRICHLOROPROPANE

GCLONDON_86 DATA ACQUIRED BY NAMU 2

SAMPLE PERIOD DURATION WAS 30 MINUTES OR 60 MINUTES AND SHOULD BE COMPARED
TO STANDARDS(30) OR CRITERIA(60) AS LISTED IN TABLE 6

	SAMPLE PERIOD DURATION/ENDING PERIOD #	1986 DEC 1 30/14:47 B012	1986 DEC 1 60/15:59 B012	1986 DEC 3 60/13:19 B033	1986 DEC 3 30/14:11 B033	1986 DEC 3 30/15:04 B034	1986 DEC 4 30/11:17 B042	1986 DEC 4 30/12:12 B042	1986 DEC 4 60/13:10 B042	1986 DEC 10 60/11:59 B102	1986 DEC 10 60/13:41 B102	1986 DEC 10 60/15:55 B102	1986 DEC 11 30/11:57 B112	1986 DEC 11 30/13:09 B112	1986 DEC 11 30/14:20 B112	1986 DEC 11 30/15:49 B113	1986 DEC 12 30/10:26 B122	1986 DEC 12 30/11:35 B122	AVERAGE	COUNT	
95	TRANS-1,4-DICL-2-BUTENE																				TRANS-1,4-DICL-2-BUTENE
96	NONANE		0.70	0.89					0.68	0.80	0.76	0.72							0.76	6	NONANE
97	ISOPROPYLBENZENE																				ISOPROPYLBENZENE
98	2-CHLOROTOLUENE																				2-CHLOROTOLUENE
99	3-CHLOROTOLUENE																				3-CHLOROTOLUENE
100	PROPYLBENZENE		0.66	0.64					0.45	0.56	0.58	0.61							0.58	6	PROPYLBENZENE
101	4-CHLOROTOLUENE																				4-CHLOROTOLUENE
102	3-ETHYLTOLUENE	2.40	2.45	1.99	2.13	2.61	2.22	1.80	1.54	1.84	1.87	2.06	2.01	1.79	1.62	1.76	1.85	1.41	1.96	17	3-ETHYLTOLUENE
103	4-ETHYLTOLUENE		0.78	0.81	0.82	1.21			0.55		0.70								0.81	6	4-ETHYLTOLUENE
104	1,3,5-TRIMETHYLBENZENE	1.69	1.46					1.45	1.24	1.01	1.45	1.54	1.27				1.52		1.40	9	1,3,5-TRIMETHYLBENZENE
105	2-ETHYLTOLUENE		0.90	0.83		1.18			1.04	0.72	0.72	0.76							0.88	7	2-ETHYLTOLUENE
106	1-DECENE																				1-DECENE
107	tert-BUTYLBENZENE																				tert-BUTYLBENZENE
108	1,2,4-TRIMETHYLBENZENE	3.57	3.59				3.40	2.51	2.04		2.75	3.04	2.95				2.55		2.93	9	1,2,4-TRIMETHYLBENZENE
109	1,5-DICHLOROPENTANE																				1,5-DICHLOROPENTANE
110	1,3-DICHLOROBENZENE																				1,3-DICHLOROBENZENE
111	TERTBUTYLCYCLOHEXANE																				TERTBUTYLCYCLOHEXANE
112	(CHLOROMETHYL)BENZENE																				(CHLOROMETHYL)BENZENE
113	DECANE	1.34	1.00	1.27		1.07				0.80	1.05	1.03	1.45						1.13	8	DECANE
114	ISOBUTYLBENZENE																				ISOBUTYLBENZENE
115	3-(CHLOROMETHYL)HEPTANE																				3-(CHLOROMETHYL)HEPTANE
116	SEC-BUTYLBENZENE																				SEC-BUTYLBENZENE
117	1,2,3-TRIMETHYLBENZENE	1.29	1.39	1.35	1.41	1.70	1.29		0.74	0.88	1.08	1.28	1.14						1.23	11	1,2,3-TRIMETHYLBENZENE
118	1ISOPROPYL4METHYLBENZENE																				1ISOPROPYL4METHYLBENZENE
119	1,2-DICHLOROBENZENE																				1,2-DICHLOROBENZENE
120	INDAN		0.50																0.50	1	INDAN
121	BUTYLCYCLOHEXANE																				BUTYLCYCLOHEXANE
122	1,3-DIETHYLBENZENE																				1,3-DIETHYLBENZENE
123	1,4-DIETHYLBENZENE		1.78																1.78	1	1,4-DIETHYLBENZENE

GCLONDON_86 DATA ACQUIRED BY NAMU 2

SAMPLE PERIOD DURATION WAS 30 MINUTES OR 60 MINUTES AND SHOULD BE COMPARED
TO STANDARDS(30) OR CRITERIA(60) AS LISTED IN TABLE 6

	SAMPLE PERIOD DURATION/ENDING PERIOD #	1986 DEC 1 30/14:47 B012	1986 DEC 1 60/15:59 B012	1986 DEC 3 60/13:19 B033	1986 DEC 3 30/14:11 B033	1986 DEC 3 30/15:04 B034	1986 DEC 4 30/11:17 B042	1986 DEC 4 30/12:12 B042	1986 DEC 4 60/13:10 B042	1986 DEC 10 60/11:59 B102	1986 DEC 10 60/13:41 B102	1986 DEC 10 60/15:55 B102	1986 DEC 11 30/11:57 B112	1986 DEC 11 30/13:09 B112	1986 DEC 11 30/14:20 B112	1986 DEC 11 30/15:49 B113	1986 DEC 12 30/10:26 B122	1986 DEC 12 30/11:35 B122	AVERAGE	COUNT	
124	BUTYLBENZENE		1.18	0.93						0.72	0.80	0.89							0.90	5	BUTYLBENZENE
125	1,2-DIETHYLBENZENE																				1,2-DIETHYLBENZENE
126	T-DECALIN																				T-DECALIN
127	UNDECANE		1.47	1.54								1.01	3.50						1.88	4	UNDECANE
128	DECAHYDRONAPHTHALENE																				DECAHYDRONAPHTHALENE
129	C-DECALIN																				C-DECALIN
130	1235-TETRAMETHYLBENZENE		1.07																1.07	1	1235-TETRAMETHYLBENZENE
131	1234-TETRAMETHYLBENZENE																				1234-TETRAMETHYLBENZENE
132	1234-TETRAHYDRONAPTHALENE																				1234-TETRAHYDRONAPTHALENE
133	1,4-DIISOPROPYLBENZENE																				1,4-DIISOPROPYLBENZENE
134	DODECANE																				DODECANE
	Total Compounds Identified	38	51	37	34	45	40	33	46	56	46	47	46	32	29	28	40	31	40		Total Compounds Identified
	Total # of Peaks	51	71	70	46	68	62	41	62	80	62	64	70	43	38	36	62	38	57		Total # of Peaks
	Total Hydrocarbons ug/m3	117.56	96.03	148.05	120.49	432.94	271.34	100.66	108.7	265.91	102.8	111.02	430.64	113.59	90.29	87.62	391.12	83.12	180.70		Total Hydrocarbons ug/m3
	Alkanes ug/m3	75.83	54.56	99.33	71.1	343.13	199.17	64.69	67.31	203.19	66.9	72.85	341.86	80.11	57.78	64.9	308.74	58.52	131.17		Alkanes ug/m3
	Cycloalkanes ug/m3	6.3	6.55	8.02	5.58	18.8	13.9	4.4	5.49	11.49	4.91	4.97	19.74	6.32	3.97	3.8	22.11	6	8.96		Cycloalkanes ug/m3
	Alkenes ug/m3	11.86	4.36	2.97	4.54	23.43	14.78	5.19	5.59	13.25	3.9	4.22	22.27	3.42	2.35	1.89	14.85	2.14	8.29		Alkenes ug/m3
	Cycloalkenes ug/m3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		Cycloalkenes ug/m3
	Alkynes ug/m3	0.56	0.48	0.38	0	0	0.66	0	0.44	0.37	0.38	0.44	0	0	0	0	0	0	0.22		Alkynes ug/m3
	Aromatics ug/m3	23.01	30.08	35.6	39.27	39.38	36.66	26.38	26.55	25.73	26.71	28.54	31.23	19.34	16.62	17.03	34.38	16.46	27.82		Aromatics ug/m3
	Chlorinated Alkanes ug/m3	0	0	1.75	0	0.2	6.17	0	3.32	10.2	0	0	15.54	4.4	9.57	0	11.04	0	4.13		Chlorinated Alkanes ug/m3
	Chlorinated Alkenes ug/m3	0	0	0	0	0	0	0	0	1.68	0	0	0	0	0	0	0	0	0.10		Chlorinated Alkenes ug/m3
	Chlorinated Aromatics ug/m3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		Chlorinated Aromatics ug/m3
	Benzene:Ethylbenzene	0.00	0.00	8.02	13.02	6.79	6.62	6.15	4.80	3.72	3.25	3.51	4.68	3.78	3.87	3.55	3.44	3.03	4.65		Benzene:Ethylbenzene
	Toluene:Ethylbenzene	3.73	3.58	3.84	3.91	4.19	3.79	3.94	3.91	4.60	3.71	3.54	4.56	3.69	3.67	3.73	4.48	3.81	3.92		Toluene:Ethylbenzene
	Xylenes:Ethylbenzene	4.23	4.16	3.95	4.17	4.12	4.09	4.07	4.03	4.01	4.01	3.95	4.05	4.07	4.07	4.04	3.85	3.91	4.05		Xylenes:Ethylbenzene

** FOR BENZENE(#44) - PEAKS ON DEC 1 INCLUDED AN UNKNOWN INTERFERENCE